Reg. No. RNP/GOA/32/2021-2023

RNI No. GOAENG/2002/6410

Panaji, 4th May, 2023 (Vaisakha 14, 1945)

SERIES I No. 5

OFFICIAL GAZETTE
GOVERNMENT OF GOA

PUBLISHED BY AUTHORITY

SUPPLEMENT

GOVERNMENT OF GOA

Department of Power

Office of the Chief Electrical Engineer

—

Notification

120/03/MYT 22-23 to 24-25/CEE/Tech

The Electricity Department, Government of Goa, according to the Regulations and as per the procedures outlined in section 61, 62, & 64 of the Electricity Act, 2003 had filed Petition for approval of Annual Performance Review of FY 2022-23, Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for FY 2023-24 before the Hon'ble Joint Electricity Regulatory Commission for the States of Goa and Union Territories.

In exercise of the powers conferred under various sections of the Electricity Act, 2003 and all powers enabling therein, on behalf of the Joint Electricity Regulatory Commission for the state of Goa and Union Territories has issued the Tariff Order dated 30th March, 2023 for approval of Annual Performance Review of FY 2022-23, Aggregate Revenue Requirement (ARR) and Determination of Retail Tariff for 2023-24 for Electricity Department, Government of Goa which is given herebelow. The said Tariff Order is effective from 1st April, 2023 and shall, unless amended or revoked, continue to be in force till further orders of the Commission.

The above is hereby brought to the notice of the public.

By order and in the name of the Governor of Goa.

Stephen Fernandes, Chief Electrical Engineer & ex officio Additional Secretary.

Panaji, 26th April, 2023.

TARIFF ORDER

Approval of Annual Performance Review of FY 2022-23, Aggregate Revenue Requirements (ARR) and Determination of Retail Tariff for FY 2023-24

Petition No. 95/2022

for

Electricity Department, Government of Goa (ED-Goa)

30th March, 2023

JOINT ELECTRICITY REGULATORY COMMISSION
For the State of Goa and Union Territories,
3rd and 4th Floor, Plot No. 55-56, Sector -18, Udyog Vihar - Phase IV
Gurugram, (122015) Haryana
Telephone: +91(124) 4684705 Telefax: +91(124) 4684706
Website: www.jercuts.gov.in
E-mail: secy.jercuts@gov.in

Table of Contents

List of Tables

List of abbreviations

Abbreviation	Full Form
A&G	Administrative and General
ACoS	Average Cost of Supply
Act	The Electricity Act, 2003
AMR	Automatic Meter Reading
APR	Annual Performance Review
ARR	Aggregate Revenue Requirement
ATE	Appellate Tribunal of Electricity
BPL	Below Poverty Line
CAGR	Compound Annualized Growth rate
Capex	Capital Expenditure
CC	Current Consumption
CEA	Central Electricity Authority
CERC	Central Electricity Regulatory Commission
CGRF	Consumer Grievance Redressal Forum
CGS	Central Generating Stations
COD	Commercial Operation Date
Cr	Crores
DDUGJY	Deen Dayal Upadhyaya Gram Jyoti Yojana
Discom	Distribution Company
DSM	Deviation Settlement Mechanism
DT	Distribution Transformer
ED	Electricity Department
EHT	Extra High Tension
ERP	Enterprise Resource Planning
FPPCA	Fuel and Power Purchase Cost Adjustment
FY	Financial Year
GFA	Gross Fixed Assets
HT	High Tension
IEX	Indian Energy Exchange Limited
IPDS	Integrated Power Development Scheme
IPP	Independent Power Producer
ISTS	Inter-State Transmission System
JERC	Joint Electricity Regulatory Commission for the state of Goa and Union Territories
KSEB	Kerala State Electricity Board Limited
LT	Low Tension

Abbreviation	Full Form
MCLR	Marginal Cost of funds based Lending Rate
MOD	Merit Order Despatch
MU	Million Units
MYT	Multi-Year Tariff
NFA	Net Fixed Assets
NTI	Non-Tariff Income
NTPC	NTPC Ltd.
OHOB	One Hut One Bulb
O&M	Operation and Maintenance
PLF	Plant Load Factor
PLR	Prime Lending Rate
PSDF	Power System Development Fund
PPA	Power Purchase Agreement
R&M	Repair and Maintenance
R-APDRP	Restructured Accelerated Power Development and Reforms Programme
REC	Renewable Energy Certificate
RLDC	Regional Load Despatch Centre
RoE	Return on Equity
RPO	Renewable Purchase Obligation
SBI PLR	SBI Prime Lending Rate
SERC	State Electricity Regulatory Commission
SLDC	State Load Despatch Center
SOP	Standard of Performance
T&D	Transmission & Distribution
TVS	Technical Validation Session
UI	Unscheduled Interchange
UT	Union Territory

Before the

Joint Electricity Regulatory Commission

For the State of Goa and Union Territories, Gurugram

QUORUM

Smt. Jyoti Prasad, Member (Law)

Petition No. 95/2022

In the matter of

Approval of Annual Performance Review of FY 2022-23, Aggregate Revenue Requirements (ARR) and Determination of Retail Tariff for FY 2023-24.

And in the matter of

Electricity Department, Government of Goa (ED-Goa) ....Petitioner

ORDER

1) This Order is passed in respect of the Petition filed by the Electricity Department, Government of Goa (ED-Goa)(herein after referred to as “The Petitioner” or “ED-Goa” or “The Licensee”) for Approval of Annual Performance Review (APR) for FY 2022-23 and Aggregate Revenue Requirement (ARR)and determination of Retail Tariff for the FY 2023-24before the Joint Electricity Regulatory Commission (herein after referred to as “The Commission” or “JERC”).

2) The Commission scrutinised the said Petition and generally found it in order. The Commission admitted the Petition on 26thDecember 2022. The Commission thereafter requisitioned further information/clarifications on the data gaps observed to take a prudent view of the said Petition. The Commission also held a Technical Validation Session to determine sufficiency of data and the veracity of the information submitted. The Public Hearing was held on 15thFebruary 2023, and all the Stakeholders/Electricity Consumers present in the Public Hearing were heard. Further, suggestions/ comments/views and objections were invited from the Stakeholders and Electricity Consumers.

3) The Commission based on the Petitioner’s submission, relevant JERC MYT Regulations, facts of the matter, rules and provisions of the Electricity Act, 2003 and after proper due diligenceand prudence check, has approved the Annual Performance Review (APR) for FY 2022-23, Aggregate Revenue Requirement (ARR) and determination of Retail Tariff for the FY 2023-24.

4) A Summary has been provided as follows:

   (a) The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at existing tariff as submitted by the Petitioner and approved by the Commission in the APR of the FY 2022-23:

Table 1: Standalone Revenue Gap/ (Surplus) at existing tariff for the FY 2022-23 (INR Cr.)

S. No.	Particulars	Petitioners’ Submission	Now Approved
1	Net Revenue Requirement	2,864.12	2,863.28
2	Revenue from Retail Sales at Existing Tariff	2,565.79	2,517.89
3	**Net Revenue Gap/ (Surplus)**	**298.33**	**345.38**

Secretary (I/c), JERC
(For Goa and UTs)

(b) The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at existing tariff as submitted by the Petitioner and approved by the Commission for the FY 2023-24:

Table 2: Standalone Revenue Gap/ (Surplus) at existing tariff or the FY2023-24(INR Cr.)

S. No.	Particulars	Petitioners' Submission	Now Approved
1	Net Revenue Requirement	2,734.25	2,682.53
2	Revenue from Retail Sales at Existing Tariff	2,250.60	2,189.60
3	**Net Revenue Gap/ (Surplus)**	**483.65**	**492.93**

(c) The following table provides ARR, Revenue and Standalone Gap/ (Surplus) at approved tariff as approved by the Commission for the FY 2023-24:

Table 3: Standalone Revenue Gap/ (Surplus) at approved tariff for the FY 2023-24 (INR Cr.)

S. No.	Particulars	Petitioners' Submission	Now Approved
1	Net Revenue Requirement	2,734.25	2,682.53
2	Revenue from Retail Sales at Approved Tariff	2385.56	2,303.14
3	Gap / (Surplus) for the year	348.69	379.39
4	Upfront assurance of Budgetary support from Govt.	348.69	379.39
5	**Net Revenue Gap/ (Surplus)**	**0.00**	**0.00**

(d) The Petitioner has proposed a tariff hike of 6% in the tariff schedule of FY 2023-24.

(e) The Commission has approved an average tariff hike of 5.19% to further reduce the reliance of the Petitioner on budgetary support from the Govt. of Goa. The Commission has approved the Average Billing Rate (ABR) of INR 5.04/kWh against the approved Average Cost of Supply (ACoS) of INR 5.87/kWh. The entire revenue gap shall be met through the budgetary support as per assurance letter of the Govt. of Goa dated 24th January, 2023. The Commission acknowledges this letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2023-24, and hence the revenue gap for FY 2023-24 has been considered as NIL.

(f) The Commission has rationalised the tariff levels for cross-subsidized categories by marginally higher than the average hike and has reduced/maintained the tariff levels at lower than average tariff hike for cross-subsidizing categories.

(g) The ABR without the Government Budgetary support has been calculated considering the per unit gap of INR 0.83/kWh (difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support). However, the Commission would like to highlight that in case this gap had to be entirely fulfilled by revenue from consumers then it would have demanded an additional average tariff increase of 16.47%.

5) This Order shall come into force with effect from 1st April 2023 and shall, unless amended or revoked, continue to be in force till further orders of the Commission.

6) The licensee shall publish the Tariff Schedule and salient features of Tariff as determined by the Commission in this Order within one week of receipt of the Order in three daily newspapers in the respective local languages of the region, besides English, having wide circulation in their respective areas of supply and also upload the Tariff Order on its website.

Secretary (I/c), JERC
(For Goa and UTs)

7) The attached documents giving detailed reasons, grounds and conditions are the Integral part of this Order.

8) Ordered accordingly.

Sd/-

(Jyoti Prasad)

Member (Law)

Place: Gurugram
Date: 30th March, 2023

Certified Copy

(S. D. Sharma)
Secretary (I/c), JERC

1. Chapter 1: Introduction

1.1. About Joint Electricity Regulatory Commission for the State of Goa and UT's (JERC)

In exercise of powers conferred by the Electricity Act 2003, the Central Government constituted the Joint Electricity Regulatory Commission for all the Union Territories except Delhi to be known as "Joint Electricity Regulatory Commission for the Union Territories" vide notification no. 23/52/2003-R&R dated 2ndMay 2005. Later with the joining of the State of Goa, the Commission came to be known as "Joint Electricity Regulatory Commission for the State of Goa and Union Territories" (hereinafter referred to as "JERC" or "the Commission") vide notification no. 23/52/2003-R&R (Vol. II) dated 30thMay, 2008.

JERC is a statutory body responsible for regulation of the Power Sector in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Dadra & Nagar Haveli, Daman & Diu and Puducherry, consisting of generation, transmission, distribution, trading and use of electricity etc. Its primary objective includes taking measures conducive to the development of the electricity industry, promoting competition therein, protecting the interests of consumers and ensuring supply of electricity to all areas.

1.2. About Goa

Goa is a state on the southwestern coast of India within the region known as the Konkan, and geographically separated from the Deccan highlands by the Western Ghats. It is surrounded by the Indian states of Maharashtra to the north and Karnataka to the east and south, with the Arabian Sea forming its western coast. It is India's smallest state by area and the fourth-smallest by population. The state is divided into two districts: North Goa and South Goa. North Goa is divided into three subdivisions — Panaji, Mapusa, and Bicholim and further into five talukas (subdistricts). South Goa is divided into five subdivisions — Ponda, Mormugao-Vasco, Margao, Quepem, and Dharbandora and further into seven talukas (subdistricts).

Goa has the highest GDP per capita among all Indian states, two and a half times that of the country. The state of Goa is famous for its excellent beaches, churches, and temples. Tourism is Goa's primary industry, it gets 12% of foreign tourist arrivals in India. The state is also rich in minerals and ores, and mining forms the second largest industry. Iron, bauxite, manganese, clays, limestone, and silica are mined extensively in Goa.

Goa is often described as a fusion between Eastern and Western culture with Portuguese culture having a dominant position in the state in its architectural, cultural or social settings.

1.3. About Electricity Department, Government of Goa (EDG)

The Electricity Department, Government of Goa (hereinafter referred to as "ED-Goa" or "EDG" or 'Petitioner') is a deemed Distribution Licensee within the meaning of Section 2 (17) of Electricity Act, 2003 and pursuant to the Section 14 of the Electricity Act. Further, Section 42 and 43 of the Electricity Act, 2003 prescribes the following duties of the deemed Distribution Licensee:

- To develop and maintain an efficient, coordinated and economical distribution system;
- To supply electricity on an application by any person, in accordance with the provisions specified in the Electricity Act 2003;
- To provide non-discriminatory open access to the consumers;
- To establish a forum for redressal of grievances of the consumers.

The primary objective of EDG is to undertake the transmission, distribution and retail supply of electricity in its license area and for this purpose plan, construct, and manage the power system network in all its aspects. EDG is further responsible for carrying out the business of purchasing and selling of electricity along with activities such as billing and collection in the area.

1.4. Multi Year Tariff Regulations, 2021

The Commission notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Generation, Transmission and Distribution Multi Year Tariff) Regulations, 2021 (hereinafter referred to as JERC MYT Regulations, 2021) on 22nd March, 2021. These Regulations are applicable in the 3rdMYT Control Period comprising of three financial years from FY 2022-23 to FY 2024-25. These Regulations are applicable to all the generation companies, transmission and distribution licensees in the State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry.

1.5. Filing and Admission of the Present Petition

The present Petition was admitted on 26th December 2022 and marked as Petition No. 95 of 2022.The Commission and the Petitioner subsequently uploaded the Petition on their respective websites.

1.6. Interaction with the Petitioner

A preliminary scrutiny/analysis of the Petition was conducted, and certain deficiencies were observed. Accordingly, discrepancy notes were issued to the Petitioner. Further, additional information/clarifications were solicited from the Petitioner as and when required. The Commission and the Petitioner also discussed various concerns of the Petitioner and key data gaps, which included retail sales, revenue from retail tariff, capitalization, tariff proposal etc. The Petitioner submitted its response to the issues through various letters/emails.

The Commission conducted the Technical Validation Session (TVS) with the Petitioner at the Commission's office in Gurugram, during which the discrepancies in the Petition were conveyed and additional information required by the Commission was sought. Subsequently, the Petitioner submitted replies to the issues raised in this session and provided documentary evidence to substantiate its claims regarding various submissions. The following table provides the list of interactions with the Petitioner along with the dates:

Table 4: Timelines of the interaction with the Petitioner

S. No	Subject	Date
1	Issue of First Deficiency Note	2nd February 2023
2	Issue of Second Deficiency Note	14th February 2023
3	Public Hearing	15th February 2023
4	Reply received from Petitioner in respect of First Deficiency Note	21stFebruary 2023
5	Technical Validation Session	3rd March 2023
6	Replies received from Petitioner in respect of Second Deficiency Note	6th March 2023
7	Issue of TVS Queries	6th March 2023
8	Replies received from Petitioner in respect of Second Deficiency Note & TVS	10th March 2023 & 13thMarch 2023

1.7. Notice for Public Hearing

Public Notices were published by the Commission in the leading newspapers as tabled below, giving due intimation to the stakeholders, consumers and the public at large about the Public Hearing to be conducted by the Commission. These notices were also uploaded on the Commission's website

Table 5: Details of Public Notices published by the Commission

Sl. No.	Date	Name of Newspaper	Language	Place of Circulation
1	7th February 2023 & 13th February 2023	Gomantak	Marathi	Goa
2		The Times of India	English	Goa
3		The Navhind times	English	Goa
4		oHeraldo	English	Goa

The Public Notice was published by the Petitioner in the following newspapers for inviting objections/ suggestionsfrom the stakeholders on the Tariff Petition:

Table 6: Details of Public Notices published by the Petitioner

S. No.	Date	Name of Newspaper	Language	Place of Circulation
1	13th January 2023	Herald	English	Goa
2		The Times of India	English	Goa
3		Gomantak	Marathi	Goa
4		Bhaangar Bhuin	Konkani	Goa

1.8. Public Hearing

The Public Hearing was held on 15thFebruary2023 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I. The major issues discussed, the responses of the Petitioner thereon and the views of the Commission have been summarized in Chapter 2 of this Order.

2. Chapter 2: Summary of Suggestions/Objections received, Response from the Petitioner and the Commission's Views

2.1. Regulatory Process

On admitting the Petition, the Commission directed the Petitioner to make copies of the Petition available to the public, upload the Petition on the website and also publish the same in the newspapers in an abridged form in the given format duly inviting comments/objections from the public as per the provisions of the JERC MYT Regulations, 2021.

The Public Hearing was held on 15th February 2023 to discuss the issues, if any, related to the Petition filed by the Petitioner. The issues and concerns raised by the stakeholders in writing and as voiced by them during the Public Hearing have been examined by the Commission. The names of the stakeholders who attended the Public Hearing are provided in Annexure-I.

2.2. Suggestions/Objections, Response of the Petitioner and Commission's Views

The Commission is appreciative of the efforts of various stakeholders in providing their suggestions/comments/ observations to make the process responsive and efficient. The relevant observations of the stakeholders have been suitably considered by the Commission while finalizing this Tariff Order. The submissions of the stakeholders, response of the Petitioner and views of the Commission are summarized below:

2.2.1. Public Hearing Notice

Stakeholder's Comment:

The stakeholder has raised objection to the hurried conduct of this public hearing with a very short notice. Also, this hearing should have been held at a time of convenience to the consumer. This is a working day, working hours. Do we expect consumers to avail leave of absence to attend this hearing? The Commission should seriously consider holding it on a weekend.

Petitioner's Response:

The Petitioner has submitted that, the advertisement and notice of public hearing was widely circulated in 4 nos. of local dailies (2-English, 1-Marathi & 1-Konkani) on 06/02/2023. Further it is to inform that Hon'ble JERC is a quasi-Judicial Authority and functions like Court. These hearing are always taken in the working day, however the decision regarding holding of Public Hearing on weekend will be suitably addressed by Hon'ble Commission.

Commission's View:

The Commission appreciates the suggestion of the stakeholders and will take it into account while conducting public hearings in the future.

2.2.2. Solarisation of a Village

Stakeholder's Comment:

ED-Goa may adopt a village and solarise to make it as a model village and the same shall be implemented in other villages as well.

Petitioner's Response:

The Petitioner has submitted that the department has noted the crucial suggestion and will make its best efforts in exploring the villages for solarisation.

Commission's View:

The Commission appreciates the suggestion of the stakeholders and directs the Petitioner to submit an action plan for the same.

2.2.3. Tariff hike for domestic category

Stakeholder's Comment:

The stakeholder has objected to the hike in domestic power tariff, especially because of its timing when inflation is high, job losses are high. It will further burden the average household. Further this hike will hardly have any impact on the net Financials of the electricity dept. Instead, the commercial and industrial tariff could be considered for proportionate increase to make up the shortfall, since the gap between domestic and commercial tariff in Goa is much narrower than any other State, especially in this southwestern region.

Petitioner's Response:

The Petitioner has submitted that the Tariff is determined by the Hon'ble JERC as per the Petition submitted by the EDG. Comparing to the neighbouring states the Tariff of Goa is less. The Government of Goa has not increased the Tariff and continued to levy the Tariff Approved BY Hon'ble Commission in FY 2019-20 for FY 2020-21 & FY 2021-22 allowing the consumers to revive from Covid-19 pandemic. The Petitioner has submitted that the increase in tariff by overall 6% has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.4. Financial Reporting

Stakeholder's Comment:

The electricity department is guilty of poor financial reporting. Unless every rupee spent, in capital expenditure or otherwise is put through a double-entry accounting process, this department has no moral authority to propose a tariff hike for any category of consumers.

Petitioner's Response:

The Petitioner has submitted that EDG functions as department under the control of Government of Goa. It is to inform that all the departments functioning under Government of Goa are following single entry system of Accounting. Accordingly, ED Goa also follows single entry system of Accounting.

Commission's View:

The stakeholder may note the Petitioner's submission in this regard. Further, the Petitioner is advised to follow prudent accounting norms for booking of entries and finalization of accounts.

2.2.5. Increase in basic power rate

Stakeholder's Comment:

The stakeholder has submitted that From April 2022 the basic power rate increased by 7%.

Petitioner's Response:

The Petitioner has submitted that, from FY 2018-2019 till FY 2021-22 (4 years) the tariff was maintained same even though JERC had given tariff hike for FY 2020-21 and FY 2021-22. This was done by way of Cabinet Decision due to Covid -19 Pandemic. JERC approved a Tariff hike of 1.58% for FY 2022-23 over FY 2021-22. The tariff approved is very nominal for FY 2022-23.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.6. FPPCA charges

Stakeholder's Comment:

The stakeholder has submitted that from April FPPCA charges have increased from 0.39/kwh in Jan 2022 to 1.69/kwh in Sept 2022 which has resulted in power bill increase by 20%.

Petitioner's Response:

The Petitioner has submitted that FPPCA charges levied to consumer are computed based on the formula approved by Hon'ble Commission. The Commission has made the provision to recover any increase in Fuel charge to be recovered based on the said formula every quarterly.

The reasons for the steep increase of FPPCA charges from Rs. 0.39 /Kwh in Jan'2022 to Rs. 1.69/Kwh in Sept '2022 are given below: -

1. Hon'ble Central Electricity Regulatory Commission (CERC) has issued tariff orders of various stations of NTPC viz Korba Stage I & II, Sipat I & II, Kawas, Gandhar & Vindhychal I & II towards revision of tariff for the period from 01/04/2014 to 31/03/2019 & approval of tariff for the period 01/04/2019 to 31/03/2024. Subsequent to issuance of tariff orders, Goa has paid a differential amount on account of revision in capacity charges of the stations mentioned above to the extent of Rs. 41.145 Crores.
2. Due to shortage of domestic coal in India and hence blending of imported coal with domestic coal, the Energy rates of NTPC stations have increased by almost 20-30%. Hence the Energy charges of various NTPC stations have increased to multifolds.
3. From the month of April-22, the rate on the Indian Energy Exchange during peak Hours was Rs. 12/kWh since all India demand had increased.
4. The differential Bill-2 for the period January'2022 to March'2022 has been raised by M/s CTUIL, Gurgaon in the month of July'2022 to the tune of Rs.19.16 Crores. M/s PGCIL WR has raised Arrears bill towards ULDC SCADA charges for the period October-16 to June-22 to the tune of Rs. 4.76 Crores.
5. M/s NTPC vide petition No.205/MP/2021 had filed petition in CERC towards recovery of additional expenditure incurred due to Ash transportation charges consequent to Ministry of Environment and forest & Climate change Government of India notification. Hon'ble CERC has admitted the said claim and has directed NTPC to recover same from the beneficiaries for the period 2019-20 to 21-22 along

with applicable interest. The amount towards recovery of ash transportation charges for the period 2019-20 to 2021-22 for Goa is to the tune of Rs.10.56 Crores. Further M/s NTPC has also recovered Ash transportation charges to the tune of Rs. 8.32 crores for the period April-22 to September-22. The total Ash transportation charges claimed was to the tune of Rs. 18.88 Crores.

6. M/s CTUIL(WR/SR) has claimed following Differential Bills:

   a) Differential Bill (Bill-2) for the period April-22 to June-22 along with arrears bill for the period July-11 to March-22.

   b) Differential Bill (Bill-2) for the period July-22 to September-22 along with arrears bill for the period July-11 to June-22 in this quarter.

Commission's View:

The Commission would like to highlight that the FPPCA is a mechanism that allows the utilities to recover/refund the variation in the power purchase cost over and above the cost approved in the Tariff Order mainly on account of increase/decrease in the power purchase cost. The mechanism ensures timely recovery of the additional cost instead of accounting it at the time of true-up which otherwise may lead to attribution of additional cost in the form of carrying cost which will have impact of enhanced tariffs in the ensuing years.

2.2.7. Additional Street light duty

Stakeholder's Comment:

The stakeholder has submitted that an additional street light duty of 0.08/kWh has been introduced adding another 1%

Petitioner's Response:

The Petitioner has submitted that Public Lighting Duty is basically the State Government tax levied by ED Goa as per Public Lighting Duty Act 2021. The Government of Goa collects Public Lighting Duty from all the Consumers of ED-Goa, through the electricity bill of the Consumers. Funds collected are utilised towards Streetlight Repairs and maintenance, improvement and development of Public Lighting infrastructure.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.8. Proposed Rate hike

Stakeholder's Comment:

The stakeholder has submitted that proposed rate hike from 4.8 to 4.9 from April 2023, will add another 2 % & will increase basic rate to 9% overall within a span of one year.

Petitioner's Response:

The Petitioner has submitted that the increase of 10 paisa per unit has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.9. Shutting of power

Stakeholder's Comment:

The stakeholder has submitted that during peak tourist season the department restricts the electricity shutting of power at night time. This forces us to use Diesel generator for extended periods causing increased production costs. During last season in the months of May and June we were given an option to opt for Additional charge in order to get supply. Although this is cheaper than Generator but somewhat we feel like the department is taking advantage to make extra revenue. It also means that Department is able to give a normal supply electricity despite being in Peak Season. Should there not be reimbursements if there is interruption of supply?

Petitioner's Response:

The Petitioner has submitted that for April - June of FY 2022 there was huge crises of Power due to the surge in demand as such rates of the exchange had gone as high as Rs. 20/ unit, however after intervention of CERC there was capping of Rs. 12 per unit for purchase of power through open market. This was unexpected and all of sudden. For this situation EDG was not prepared and could not clear on exchange platform the quantum of power that was required. Hence as per the request of Industries the power was purchased at the rate of Rs.12 per unit in April-May'2022 and was recovered through them. However, it is to inform that for Current FY 2023-24, EDG has planned in advance for procurement of additional power which will be required to meet the summer demand of April-May' 2023.

Commission's View:

The Petitioner is advised to be more prepared for such type of situation and should proactively plan the power requirement at optimal cost. Further, the Petitioner is directed to ensure compliance of supply in line with JERC (Standards of Performance) Regulations.

2.2.10. Demand/Fixed Charges

Stakeholder's Comment:

The stakeholder has submitted that we are charged Demand/Fixed Charges every month these charges itself are high. Why should this be increased?

Petitioner's Response:

The Petitioner has submitted that the Tariff is determined by the Hon'ble JERC as per the Petition submitted by the EDG. In the Tariff there are two components Fixed Charges and Energy Charge. Fixed charge is the amount collected from the consumer to recover the Capital Expenditure invested and overheads of the department. ED-Goa also pays fixed charged to its generators even if they are on shut downs/ overhauling/maintenance. The variable charge is to recover the cost of energy supplied to the Consumer. Comparing to the neighbouring states the Industrial Tariff of Goa is less.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order. Further, the Commission would like to highlight that the fixed charges supposed to reflect the fixed cost incurred by the department, however, at the approved tariff fixed cost coverage is only ~23%.

2.2.11. Public Lighting

Stakeholder's Comment:

The stakeholder has submitted that Goa Industries provide all year-round revenue generation and Government should support the industries stronger in such instances. Why is Public Lighting charged to Industries? Our Industrial Estate in Pilerne is most of the time in darkness.

Petitioner's Response:

The Petitioner has submitted that that Public Lighting Duty is basically the State Government tax levied by ED-Goa as per Public Lighting Duty Act 2021. The Government of Goa collects Public Lighting Duty from all the Consumers of ED-Goa, through the electricity bill of the Consumers. Funds collected are utilised for improvement and development of Public Lighting infrastructure. In specific case of Pilerne Industrial Estate it is found that no street lights are installed by Industrial Development Cooperation (IDC) which otherwise IDC was providing in all Industrial Estates of Goa before taking over of street light by Electricity Department. However, necessary action will be taken by department in providing streetlight in Pilerne Industrial Estate.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. Further, the Petitioner may take up the issue of providing streetlight in Pilerne Industrial Estate with the concerned department.

2.2.12. Power purchase

Stakeholder's Comment:

The stakeholder has submitted that EDG has under-estimated for FY 2022-23, Power purchase quantum and cost 4726.31 MU and Rs 1839.54cr but revised is 4998.19 MU and Rs 2230.19 cr. (table 4.12). The energy estimation is less by approximately 5% but cost is less by 21%. This clearly indicates that the estimates of cost of power purchase is too much away from target.

Petitioner's Response:

The Petitioner has submitted that the Power purchase quantum and cost approved in MYT order dated 31 March 2022 for FY 22-23 is 4726.31 MU and Rs 1839.54 cr respectively. However, keeping in mind, the load growth EDG has increased its power purchase quantum so as to take care of increasing load. Due Care is taken to estimate proper costing by incorporating the recent increase in the Power Purchase Cost of NTPC Stations due to low availability of domestic coal and thereby blending with costly imported coal.

Commission's View:

The Commission has noted the concern of the stakeholders and the same is discussed while approving the power purchase cost in Chapter 5 of the Tariff Order.

2.2.13. Revenue from sale of power

Stakeholder's Comment:

The stakeholder has submitted that Revenue from sale of power was estimated INR 2024 crore and revised upwards to INR 2565.79 crore.

Petitioner's Response:

The Petitioner has submitted that Revenue from sale of power was estimated as INR 2024 crore by the Hon'ble Commission. However, since the sales has been increased by ED Goa in current petition the revenue has been revised upwards.

Commission's View:

The Commission has noted the concern of the stakeholders and the same is discussed while approving the energy sales and revenue in Chapter 5 of the Tariff Order.

2.2.14. Projections of energy sale

Stakeholder's Comment:

The stakeholder has submitted the projections of energy sale has been considered on the basis of previous years (table 5.6). The power demand and energy sale is expected to be higher than pre-pandemic (doubling in ten years) due to following reasons:

a. Commissioning of Zuari Bridge,
b. Commissioning of green field second international airport at Mopa
c. Completion of NH 66;
d. Exponential increase in EV population (8 KW average) charging power requirement,
e. Goa has established as second home apart from first class tourism destination,
f. High end malls and shopping complexes are being added (ref GST collection highest in India)
g. Air conditioning load is likely to increase due to upward mobility of economy,
h. High Power demanding industry (for eg. Binani group is expected to set up a 50 MW demand facility) in Colvale
i. Restarting of mining industry etc and
j. By release of suppressed demand due to improvement in Distribution infrastructure. Presently demand is suppressed by under voltage conditions at Verna, Calangute, Candolim, etc.
k. There are pockets in Sanquelim, Tuem, Colem etc where the power reliability is poor (more than 800 hrs of no power). This is expected to improve because of the underground cabling program. EDG may be directed to revise upwardly its demand forecast and energy sale estimation.

Petitioner's Response:

The Petitioner has submitted that the sales projected for FY 23-24 has been estimated considering the above load growth. The entire load shown above may not come in FY- 23-24 hence the balance load growth will be assessed by ED-Goa and will be suitably incorporated in future years petition

Commission's View:

The Commission has noted the concern of the stakeholders and the same is discussed while approving the energy sales in Chapter 5 of the Tariff Order.

2.2.15. Average Power Purchase Rate

Stakeholder's Comment:

The Average Power Purchase rate is Rs 4.06 per unit which is all time high. Traditionally Goa has been sourcing power at very economical rates. The practise of purchasing power from open market at energy exchanges may be limited to some percentage of peak power requirements. Buying peak power fully from energy exchanges will strain consumers. Considering the increasing power demand, EDG should resort to tendering at the least for 125 MW power.

Petitioner's Response:

The Petitioner has submitted that average power purchase cost of Rs. 4.06 per unit is high due to blending of imported coal with domestic coal, high target of fulfillment of RPO for which short term power is purchased at Rs. 5 per kwh and above. However, EDG is making its best effort to tie up long term power at reasonable rate so as to fulfill the demand as well as to optimise the power purchase cost. EDG has signed PPA with SECI for purchase of 150 MW of Hybrid Power (Solar, Wind, BESS) with assured peak power at the rate of Rs.4.03 per unit. Various proposal for tieing up of cheap as well as renewable power is under scrutiny. Also, EDG is encouraging swapping of power transaction (Banking arrangement) were EDG's off peak surplus power is swapped to needy utility through CERC approved license trader and power is taken back by EDG in peak hours (deficit hours) on fixed ratio basis. This is much economical as EDG doesn't pay for peak power rates and financial liability is only to the extent of trading margin and open access charges.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. The Commission would also like to highlight that the power purchase cost is an uncontrollable factor and it has gone up in recent years due to unavailability of enough domestic coal and the increased cost of blending of imported coal has led to the increase in Power Purchase Cost across the nation.

2.2.16. Employee Expenses

Stakeholder's Comment:

The Employee Expenditure, which is 82% of the Total Expenses for 2022-23, is very high. Annexure-3 giving the report of the O&M Manpower Study (Item No 4 of Para 12.1) is not shown in the Petition.

Petitioner's Response:

The Petitioner has submitted that the employee expenses for H1 provided in the Table 4-16 is the actual expenses and based on it the projections for H2 is prepared. So, the expenses pertaining to Employee are legitimate. The manpower Study is submitted to the JERC as a part of the Annexures and the same are uploaded on website.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard.

2.2.17. HT-Industrial Consumer

Stakeholder's Comment:

HT-Industrial Consumers: As an example, in the case of MRF, the average Power landed cost including fixed, FPPCA and other charges, was Rs 6.01 in 2021-22. After the revision, in 2022-23 this has jumped to Rs 7.34 p.u., causing an impact of Rs 11 Crores per annum. With the proposed hike the additional burden on this consumer will be approximately Rs 1 Crore. Efficiency improvement is a must if industry has to survive in Goa.

Petitioner's Response:

The Petitioner has submitted that the Tariff for various category of consumers is determined by Hon'ble JERC after scrutinising the petition submitted by the EDG based on the JERC Distribution Regulations, 2021. The FPPCA charges depends upon the change in the fuel cost due to various factors (increase in cost of local coal prices, increase in the cost of imported coal, issues regarding to availability of Coal, inflation) and the same is computed quarterly and vetted by Hon'ble JERC. So, the tariff and the FPPCA cost levied are legitimate.

Commission's View:

The Commission appreciates the stakeholders' suggestions and would like to highlight that the FPPCA is a mechanism that allows the utilities to recover/refund the variation in the power purchase cost over and above the cost approved in the Tariff Order mainly on account of increase/decrease in the fuel cost. The mechanism ensures timley recovery of the additional cost instead of accounting it at the time of true-up which otherwise may lead to attribution of additional cost in the form of carrying cost and will lead to enhanced tariffs in the ensuing years.

2.2.18. Pumped Hydro Storage power

Stakeholder's Comment:

In Oct 2022, Minister for Power, Goa had announced that the encourage Pumped Hydro Storage power. There is no mention on this. Promotion of Solar power and offshore wind etc have to be explored for the benefit of the environment and the state. And for storage of green power, in order to make power available during non-generating periods and peak load periods, batteries are required. Due to the high cost of batteries, as an incentive, subsidy should be made available.

Petitioner's Response:

The Petitioner has submitted that EDG has taken a note of it. Suitable measures will be taken in collaboration with Goa Energy Development Agency GEDA.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. Further, the Petitioner is directed to explore the feasibility of Battery enabled storage system as a backup to meet the peak demand and round the clock power supply.

2.2.19. Converting divisions and sub-divisions

Stakeholder's Comment:

Converting divisions and sub-divisions as strategic business units is a very important step. The excuse provided by EDG is flimsy and the energy between subdivisions can be easily accounted.

Petitioner's Response:

The Petitioner has submitted that department is working on the division level audit. Once the audit is in place the issues will be resolved.

Commission's View:

The stakeholder may note the Petitioner's submission in this regard and directs the Petitioner to adopt best industry practices of internal audit so that audit of all division and sub-divisions is carried out in a timely manner.

2.2.20. Tariff for Agriculture category

Stakeholder's Comment:

The increase in tariff for Agriculture (Allied Activities), HT and LT, should be brought on par with the increase in tariff for Agriculture (Pump Sets/Irrigation). Increasing tariff to Low and medium voltage consumers is going to hurt small and cottage industries the most. They are the highest employment generators. This may please be avoided.

Petitioner's Response:

The Petitioner has submitted that increase in tariff by overall 6% has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.21. Tariff Hike

Stakeholder's Comment:

The Goa Elect Dept's petition to the JERC proposes a 6% tariff hike across the board. The wording of the petition now makes one thing clear that the Goa Govt has proposed the hike and that the JERC only approves it. In the past power ministers of BJP Govts have claimed that JERC had imposed power tariff hikes on the common man, but now this one more lie now nailed. It has always been the case that the Govt proposes tariff hikes and the JERC approves them based on figures provided by the Elect Dept which show gaps in revenue to justify the hikes. It must be noted that in January 2022 or thereabouts, when the JERC had approved the Goa ED's proposal for tariff hike, the Goa Govt had decided to freeze power tariffs, obviously because it was an election year. So, if the Govt can refrain from hiking tariffs only for votes, why should they increase tariffs now when the common man is burdened by price rise, inflation, joblessness, etc., all because of the double engine govt's failure to protect the interests of the common man. If you can try to fool the public just to get votes by keeping tariffs low, why should you propose a hike now when things are so difficult. Another point to be noted is that the justification for the hike is based on the revenue gap shown by the Elect Dept. Page of the petition clearly states that the Elect Dept's accounts for 2019-20 & 2021-22 have not yet been audited though they should have been submitted by November 2021. The petition dated 30.11.22 promises that the audited accounts for these years would be submitted by 20.12.22. It would be interesting to know whether it has been done. In any case, the figures on which the tariff hike is based are 'provisional actual numbers' - a term used time and again in the petition. Is this another way of saying that the hike is not based on actual numbers but numbers that have been fabricated or fudged, just to justify the tariff hike?

Petitioner's Response:

The Petitioner has submitted that it has audited all its financial accounts till FY 21-22 from Comptroller and Auditor General of India (CAG). Accordingly, ED-Goa has also filed True Up Petition for FY 17-18 to FY 19-20 before Hon'ble Commission in the month of August'2022. All the proceeding of True Up petition from Hon'ble Commission are over and is waiting for final Orders. As regards submission of Audited account by 20.12.22, it is to submit that the accounts were audited by Dec'2022, However CAG has issued the certificate in the month of Feb'2023. Accordingly, the True Up petition for FY- 20-21& FY- 21-22 are also filed by ED-Goa in Feb'2023.

Commission's View:

The Commission has noted the concerns of the stakeholders.

2.2.22. Revenue Gap

Stakeholder's Comment:

Coming to the 'revenue gap' which is sought to be filled by burdening the pockets of the common man, has the EDG taken any measures in the recent past to investigate the reasons for the revenue gap. One obvious reason is the AT&C loss (Aggregate Technical & Commercial Loss) which denotes the amount of power generated or purchased (in Goa's case mainly purchased) which does not reach the consumers and hence cannot be sold, because it is lost in either technical losses meaning distribution losses because of poor quality infrastructure or commercial losses like theft of energy, inefficient billing methods, etc

The petition admits a transmission & distribution loss of 8.45% which is very high for a state like Goa having a very small size and a practically even terrain. The central Power Ministry's website shows an AT&C loss of 13.39% for Goa. Compare this to the 12.54% AT&C loss of a state like Himachal Pradesh, whose area is 15 times Goa's and which has an extremely hilly terrain, which ensures high distribution losses. This obviously means that our Govt is making the common man pay for its own inefficiency & incompetency.

The proposed revenue gap recovery through tariff hike for FY 2023-24, which will come into effect from 1.4.23, is Rs 134.96 crores. The budgetary support commitment from the Government to cover the remaining revenue gap is Rs 348.69 crores. However, the Electricity Department, which should be looking inwards to be competent and efficient enough to bridge the revenue gap by improving its performance and financial accountability, wants to burden the consumer directly and the taxpayer through the budgetary support. The GFP is convinced that the consumer should not be burdened further in these difficult times and that the JERC should compel the Goa Electricity Department to reduce its AT&C loss percentage which would also bring down the budgetary support required from the Govt. The GFP also demands that the figures put up by the Electricity Department should be vetted by an independent authority so that the justification for both the tariff hike and budgetary support is checked for authenticity.

GFP would also like to point out that in October 2018 the then Power Minister had promised that there would be no tariff hike till 24 hrs continuous power supply was achieved. We would also want to remind the Chief Engineer that he was present at the PC on 14.1.2020 when the Power Minister reiterated his statement of 2018. Would the Chief Engineer like to claim that his Department had achieved the promise of 24 hrs continuous power supply when he filed this petition on 30.11.22?

Petitioner's Response:

The Petitioner has submitted that the Government of Goa has not increased the Tariff and continued to levy the Tariff Approved by Hon'ble Commission in FY 2019-20 for FY 2020-21 & FY 2021-22 allowing the consumers to revive from Covid-19 pandemic. Further for FY 2022-23 the EDG has proposed to retain the same tariff. However, JERC has increased the overall tariff to the level of 1.58% only.

Due to increase in the coal and short-term market prices to bridge the peak requirements of the State of Goa, the power purchase cost has increased. Due to less availability of coal and thereby blending of costly imported coal with domestic coal, the prices of NTPC stations from where goa purchases 85% of its power has gone very high. Power purchase cost forms overall forms around 70-80% of its Annual Revenue Requirement. Cost of power purchase is uncontrollable. Further to provide the quality power supply, EDG is investing on the System strengthening projects.

Further, EDG submits that, the Electricity Department accounts for FY 2020-21 & FY 2021-22 has been audited and the controller CAG has issued the certificate on 08.02.2023. The revised projections for FY 2022-23 and projections for FY 2023-24 were based on the Actual figures of the past.

EDG have improved their Distribution losses to 8.45% for FY 2021-22 w.r.t to the JERC Approved figure of 10.25% which is a very good improvement. This is due to various infrastructure upgrades. Further, EDG is planning for more infrastructure development and performance is likely to improve in the upcoming years which will reduce the AT&C losses as well.

The Bureau of Energy Efficiency (BEE) has setup consultants to review and verify the Energy balance and Losses at various levels. The report has been submitted to BEE for FY 2020-21 & FY 2021-22.The EDG is working swiftly to provide 24x7 power supply to its Consumers in the State of Goa. Most of the Overhead lines are being converted to Underground lines to avert the unnecessary power cuts and power outages due to faults and other reasons. System Strengthening works are in progress to meet the existing and upcoming demand.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. The Commission has discussed the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order. Further, the Petitioner is directed to complete the Energy Audit on priority and share the energy audit report within three months of issuance of this order.

2.2.23. Unnecessary Burden on Industries

Stakeholder's Comment:

We, Goa State Industries Association, are the apex organization for Micro, Small and Medium Enterprises (MSMEs) in Goa.

We have received several representations from our members informing us that the Petition of November 2022 filed by Electricity Department, Government of Goa, before you, for approval of tariff for 2023-24 is unjustified and will put heavy financial burden on the industries in Goa which are just recovering from the shocks of Covid-19 pandemic. Some of the representations received by us are enclosed for your kind perusal.

Sir, you will kindly observe that due to increase in FPPCA charges, imposition of street light duty and other charges, the power tariff in the State of Goa has already been increased by around 7% during the last eleven months. The proposed hike in rates will add another 2% and, accordingly, basic power rate will increase by around 9% over that of April 2022.

Petitioner's Response:

The Petitioner has submitted that from FY 18-19 till FY 21-22 (4 years) the tariff was maintained same even though JERC had given tariff hike for FY 20-21 and FY 21-22. This was done by way of Cabinet Decision due to Covid -19 Pandemic.JERC approved a Tariff hike of 1.58% for FY-22-23 over FY-21-22. The tariff approved is very nominal for FY 22-23.

EDG submits that, FPPCA charges levied to consumer are computed based on the formula approved by Hon'ble Commission. The Commission has made the provision to recover any increase in Fuel charge to be recovered based on the said formula every quarterly.

The reasons for the steep increase of FPPCA charges from Rs. 0.39 /Kwh in Jan'2022 to Rs. 1.69/Kwh in Sept '2022 are given below: -

1. Hon'ble Central Electricity Regulatory Commission (CERC) has issued tariff orders of various stations of NTPC viz Korba Stage I & II, Sipat I & II, Kawas, Gandhar & Vindhychal I & II towards revision of tariff for the period from 01/04/2014 to 31/03/2019 & approval of tariff for the period 01/04/2019 to 31/03/2024. Subsequent to issuance of tariff orders, Goa has paid a differential amount on account of revision in capacity charges of the stations mentioned above to the extent of Rs. 41.145 Crores.

2. Due to shortage of domestic coal in India and hence blending of imported coal with domestic coal, the Energy rates of NTPC stations have increased by almost 20-30%. Hence the Energy charges of various NTPC stations have increased to multifolds.

3. From the month of April-22, the rate on the Indian Energy Exchange during peak Hours was Rs. 12/kWh since all India demand had increased.

4. The differential Bill-2 for the period January'2022 to March'2022 has been raised by M/s CTUIL, Gurgaon in the month of July'2022 to the tune of Rs.19.16 Crores. M/s PGCIL WR has raised Arrears bill towards ULDC SCADA charges for the period October-16 to June-22 to the tune of Rs. 4.76 Crores.

5. M/s NTPC vide petition No.205/MP/2021 had filed petition in CERC towards recovery of additional expenditure incurred due to Ash transportation charges consequent to Ministry of Environment and forest & Climate change Government of India notification. Hon'ble CERC has admitted the said claim and has directed NTPC to recover same from the beneficiaries for the period 2019-20 to 21-22 along with applicable interest. The amount towards recovery of ash transportation charges for the period 2019-20 to 2021-22 for Goa is to the tune of Rs.10.56 Crores. Further M/s NTPC has also recovered Ash transportation charges to the tune of Rs. 8.32 crores for the period April-22 to September-22. The total Ash transportation charges claimed was to the tune of Rs. 18.88 Crores.

6. M/s CTUIL(WR/SR) has claimed following Differential Bills:
   a) Differential Bill (Bill-2) for the period April-22 to June-22 along with arrears bill for the period July-11 to March-22.
   b) Differential Bill (Bill-2) for the period July-22 to September-22 along with arrears bill for the period July-11 to June-22 in this quarter.

The Petitioner has further submitted that the Public Lighting Duty is basically the State Government tax levied by ED Goa as per Public Lighting Duty Act 2021. The Government of Goa collects Public Lighting Duty from all the Consumers of ED-Goa, through the electricity bill of the Consumers. Funds collected are utilised towards Streetlight Repairs and maintenance, improvement and development of Public Lighting infrastructure

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.24. Revenue from Industrial category

Stakeholder's Comment:

As per Table 1-1: No. of Consumers and Sales for FY 2022-23 (H1) on page 16 of the petition, it is evident that industrial consumers which accounts for 0.94% of the total consumers contribute Rs. 1114.74 crores which is 50.33% of the total revenue. You will kindly note that Domestic Consumers and Commercial Consumers which account for 80.17% and 15.43% respectively, generate 32,27% and 14.17% of the total revenue. It therefore, shows that Government of Goa is providing subsidized power to Domestic and Commercial Consumers at the cost of the Industrial Consumers. Moreover, during the peak season (Apr-June last year) when there was shortage of power and load shedding was announced, the industries came forward and agreed to put the bill for purchase of power from open market (IEX) and contributed Rs. 33.34 crores.

Petitioner's Response:

The Petitioner has submitted thatthe efforts have been made to reduce the cross subsidy of domestic consumers and commercial consumers (upto 100 Units only) by proposing reasonable tariff hike in the current petition. However, the commercial consumers above 100 units are having high tariff which is not been cross subsidized by industries. EDG submits that, for April to June of FY 2022, there was huge crises of power due to the surge in demand as such rates of the exchange had gone as high as Rs. 20/ unit, however after intervention of CERC there was capping of Rs. 12 per unit for purchase of power through open market. This was unexpected and all of sudden. For this situation EDG was not prepared and could not clear on exchange platform the quantum of power that was required. Hence as per the request of Industries the power was purchased at the rate of Rs.12 per unit in April-May '2022 and was recovered through them. However, it is to inform that for Current FY 2023-24, EDG has planned in advance for procurement of additional power which will be required to meet the summer demand of April-May' 2023.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.25. Tariff hike

Stakeholder's Comment:

The stakeholder has requested that no further increase in power tariff should be imposed on the industrial consumers. Any further increase in the tariff will blunt the competitive edge of the industries in Goa leading to closure of some industries and rise in unemployment rate in the State. It appears that with the proposed hike, Electricity Department wants to follow the old proverb of killing the goose that lays the golden eggs.

Petitioner's Response:

The Petitioner has submitted that increase has been proposed by ED-Goa in present petition and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.26. Tariff for Agriculture category

Stakeholder's Comment:

The increase in tariff for Agriculture (Allied Activities), HT and LT, should be brought on par with the increase in tariff for Agriculture (Pump Sets/Irrigation). Increasing tariff to Low and medium voltage consumers is going to hurt small and cottage industries the most. They are the highest employment generators. This may please be avoided.

Petitioner's Response:

The Petitioner has submitted that increase in tariff by overall 6% has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.27. Tariff for Railway traction

Stakeholder's Comment:

Konkan Railway Corporation Limited (KRCL) has verbally stated in the Public Hearing that there is no Railway Traction Tariff present in Goa and hence KRCL is billed in the HT Industrial Tariff (Connected at 220 kV) Category. KRCL has requested EDG and Hon'ble JERC to implement Railway Traction tariff in the upcoming Tariff Order for FY 2023-24 as implemented the same is implemented in other state.

Petitioner's Response:

The Petitioner has submitted that presently Konkan Railways are billed under EHT Industrial Tariff Category. As other SERCs are having railway traction tariff, Hon'ble Commission may suitably decide on for introducing new category of Railway Traction Tariff in Goa.

Commission's View:

The Commission appreciates the stakeholders' suggestion and directs the Petitioner to submit the relevant details such as sales and connected load for Commission's evaluation. Accordingly, the Commission will evaluate the proposal.

2.2.28. Fixed Charges

Stakeholder's Comment:

The Fixed Charges which were hiked for FY 2022-23 from Rs.60/Months to Rs.20KW/Month = Rs. 320/Month. The Hike of Rs. 260/Month for Me was Extremely High. The Fixed Charges are Proposed to Be Hiked to Rs.22KWMonth= Rs.352/Month for FY2023-24. Since I Use 5 Star rated Appliances my Energy Consumption is Around 150-200 units. So my Energy Charges are around Rs.300/Month. But the Fixed Charges for me of Rs. 320/Month is totally not acceptable, when I am consuming less Energy compared to the other Consumers.

Further he suggested to reduce the Fixed Charges from Rs. 20KW/Month (Rs. 320) to Rs.10/Month (Rs.160).To compensate for the Losses for Financial year, Kindy Increase only the Energy Charges and Not Fixed Charges. Kindly Reduce the Fixed Charges. Please Give Justice to the Consumer Using 5 star Rated Appliances. My Main aim is to save Energy.

Petitioner's Response:

The Petitioner has submitted that prior to FY 22-23 the fixed charges were fixed for single phase and three phase domestic consumers irrespective of the load of the consumer. Hon'ble Commission in its tariff order for FY 22-23 has introduced the fixed charges to be charged based on load of the consumer. From the above objection it is noticed that the consumer is having 16 KW of load hence is getting the bill of Rs. 320/month. The increase in tariff by overall 6% has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order. Further, the Commission would like to highlight that the fixed charges supposed to reflect the fixed cost incurred by the department, however, at the approved tariff fixed cost coverage is only ~23%.

2.2.29. Tariff Hike

Stakeholder's Comment:

The Power Tariff increase proposal submitted by GED is going to increase our landing Power Cost. This frequent increase in Electricity Tariff seriously affects our company.

Average landing Power cost per Unit in the year 2021-22 was Rs 6.01. Average landing Power cost per Unit in the year 2022-23 was Rs 7.34. This increase has resulted into additional burden of Rs 11.02 Cr. Per annum.

1. Energy charges from Rs.4.40 to 4.70/wit: Rs 2.75 Cr /Annum
2. FPPCA (2022-23 average Rs.1.09/unit till Dec'23) (2021-22 average Rs.0.42lunit)
3. Increase Rs. 0.67/unit over previous year: Rs. 6.08 Cr/Annum
4. Lighting duty. Introduced from June 2022 Rs. 0. 08/unit: 0.6 Cr/Annum
5. Additional Power charge Apr /May / June-22 Rs. 1.20 /unit: 1.62 Cr/Annum

Proposed tariff rise will further increase our electricity bill by Rs 1.00 Cr per annum. In the present situation after prolonged Covid pandemic and global economic crisis, we are facing serious financial problem along with other industries. Any further increase in the Tariff rates will increase our burden further. Therefore, we humbly request your honourable office not to increase the proposed Power Tariff for the year 2023-24.

Petitioner's Response:

The Petitioner has submitted that the concern is noted, However the Tariff of EDG is comparatively less than the neighbouring states. The following is provided with the Tariff of the State Maharashtra and State Karnataka. The Petitioner has further submitted that the increase of 10 paisa per unit has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.30. Minimum charges applicable to the closed commercial premises

Stakeholder's Comment:

Dr. Narayan Y Naik, submitted that he had closed his clinic (commercial premise) at the FF/4, Rangavi Building, Margao – Goa. 403601 for 20 years and since then there has been no activity over there and all these years he has been paying the minimum charges applicable to the closed commercial premises. Further, submitted that it has been observed that there is consistent hike in the power tariff in the recent times, particularly in the last one year the tariff calculated as per the sanction load which is Rs 40/- per KW per month, is already quite high. With the current proposed hike in the power tariff, he mentioned that he is not sure how much the tariff will be increased further with effect from 1st April 2023. Further submitted that, as an owner of a closed premise with absolutely no commercial activity, its already quite a burden to pay the minimum applicable charges, especially when there is no income from such premise.

Dr. Narayan Y Naik mentioned that the present tariff is very high (specifically mentioned that he couldn't raise an objection on this when it was hiked earlier) and requests Hon'ble JERC to take back such unaffordable tariffs, and consider keeping the least possible tariff on the closed premises so that this hike in tariff will not burden the consumers like him unnecessarily.

Petitioner's Response:

The Petitioner has submitted that the consumers are liable to pay the fixed charges as and energy charges for the consumption of Power. Irrespective of the consumption the Consumer is liable to pay the fixed charges for the connection. So, for a closed premise with no consumption, the consumer has to pay the minimum charges which is fixed charges for Commercial Consumers. The fixed charge is collected to reimburse the Capital invested in improving the infrastructure setup and other overheads of EDG. Further, the Petitioner submitted that, from FY 18-19 till FY 21-22 (4 years) the tariff was maintained same even though JERC had given tariff hike for FY 20-21 and FY 21-22. This was done by way of Cabinet Decision due to Covid -19 Pandemic.

JERC approved a Tariff hike of 1.58% for FY 22-23 over FyY21-22. The tariff hike approved by Hon'ble JERC is very nominal for FY 22-23. With respect to the increase of tariff proposed by ED-Goa, the Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholders. The Commission would like to highlight that the fixed charges supposed to reflect the fixed cost incurred by the department, however, at the approved tariff fixed cost coverage is only ~23%. Further, even though premises are closed, the Petitioner has to keep the power tied up against the contracted demand of such premises to ensure power availability keeping in mind the scenario of these consumers start consuming power on real time basis.

2.2.31. Tariff for Industrial category

Stakeholder's Comment:

We are two Roller Flour Mills in Goa. Being into Roller Flour Milling add any value to our products (just processing/ milling). Our Raw Material Wheat is procured from UP/Punjab/Haryana which already adds lot to our transportation cost. Also, Goa being a small consuming state it's highly difficult to compete with bordering states which has high volume consumption and Goa acts like a dumping market for them. We do not receive any concession or support even from FCI in terms of procurement or pricing in wheat, we face huge difficulties in competing with neighbouring states.

We are HT consumers, our current energy charges for non-peak hours unit (proposed revised charges Rs. 4.90 per unit) and for peak hours is at Rs. 5.76 per unit (proposed revised charges not known).

Petitioner's Response:

The Petitioner has submitted that the concern is noted. However, in comparison with Maharashtra and Karnataka, the Industrial Tariff are less in the State of Goa. The Petitioner has further submitted that the increase in tariff by overall 6% has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

2.2.32. Tariff Hike across categories

Stakeholder's Comment:

Power tariff charges have been increased by Rs. 0.3 per unit on average across all categories.Public Lighting duty of Rs. 0.08 per unit has been imposed on industry. As we understand, same is done for ensuring provision of street lighting to industrial estates, however, at our Industrial estate in Kundaim, we still see that street lighting is not adequate even on the main roads of our estate.

Petitioner's Response:

The Petitioner has submitted that Public Lighting Duty is basically the State Government tax levied by ED Goa as per Public Lighting Duty Act 2021. The Government of Goa collects Public Lighting Duty from all the Consumers of ED-Goa, through the electricity bill of the Consumers. Funds collected are utilised for improvement and development of Public Lighting infrastructure. Since the execution of projects takes time, funds collected during the year cannot be completely utilised in the respective year. In specific case of Kundaim Industrial Estate necessary action will be taken by department in providing streetlight.

Commission's View:

The stakeholders may note the Petitioner's submission in this regard. Further, the Petitioner may take up the issue of providing streetlight in Kundaim Industrial Estate with the concerned department.

2.2.33. Hike in unit price of consumers (HT)

Stakeholder's Comment:

The Electricity Department should postpone the hike in unit price of consumers (HT). After the Covid-19 Pandemic, 50% units are closed or are partially working, reducing the demand for Oxygen by these sectors such as shipbuilding, fabrication, etc. Government has established liquid tanks and smaller plants during the Pandemic and this has created a surplus for Oxygen gas in the state. Prices for diesel and lubricants, labours and cylinders have risen since March 2019, thereby increasing the production cost of Oxygen. Due to Covid -19 hardships faced by our customers, we have not increased the rates, as users cannot sustain increase in Industrial Gas rates. Further, Medical Oxygen rates cannot be increased above stipulated rates by PESO. Proposed increase in rate shall be last nail in the coffin of this Industry. The government is procuring liquid Oxygen which is being wasted due to wrong design and capacity utilization whereby gas is vented out and the government is shelling more money on this venture, on operations and maintenance. There should not be any increase in rates for those units whose expenditure on electricity is more than 60% cost of production. Hope government will sympathetically consider our request and refrain from hiking the power rates.

Petitioner's Response:

The Petitioner has submitted that from FY 18-19 till FY 21-22 (4 years) the tariff was maintained same even though JERC had given tariff hike for FY 20-21 and FY 21-22. This was done by way of Cabinet Decision due to Covid -19 Pandemic. The Petitioner has further submitted that a Tariff hike of 1.58% for FY-22-23 over FY-21-22. The tariff approved is very nominal for FY 22-23. Further EDG submits that, the increase in tariff by overall 6% has been proposed by ED-Goa and Hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order

2.2.34. Increase in tariff for Agriculture (Allied Activities),

Stakeholder's Comment:

The increase in tariff for Agriculture (Allied Activities), HT and LT, should be on par with the increase in tariff for Agriculture (Pump Sets/Irrigation) as the tariff difference between Agriculture (Allied Activities) & Agriculture (Pump Sets/Irrigation) already exists. Since Industry and Agriculture (Pump Sets/Irrigation) tariff increase is 10 paisa per unit, Agriculture (Allied Activities) which generates more jobs should not be burdened with additional increase in tariff. Hence 25 paise and 20 paise per unit tariff increase of LT and HT Agriculture Allied respectively should be lowered to 10 paise per unit, at par with Industry and Agriculture (Pump Sets/Irrigation)

Petitioner's Response:

The Petitioner has submitted that the increase of 25 paisa & 20 paisa per unit of LT and HT Agriculture Allied respectively has been proposed by ED-Goa and hon'ble Commission will suitably decide on such hike after considering all objection/suggestions and prudent check of entire petition submitted by ED-Goa.

Commission's View:

The Commission has noted the concern of the stakeholder's and the same is discussed in the principles adopted for approving the Tariff in Chapter 6 of the Tariff Order.

3. Chapter 3: True-up of the FY 2020-21 and FY 2021-22

3.1. Applicable provisions

The True up for the FY 2020-21 and FY 2021-22 is to be carried out in accordance to Regulation 11 of the JERC MYT Regulations, 2018, stated as following:

"11.1 The Generating Company, Transmission Licensee and Distribution Licensee shall be subject to annual performance review and truing up of expenses and revenue during the Control Period in accordance with these Regulations.

11.2 The Generating Company, Transmission Licensee and Distribution Licensee shall file an application for the annual performance review of the current year, truing up of the previous Year or the Year for which the audited accounts are available and determination of tariff for the ensuing Year on or before 30th November of each Year, in formats specified by the Commission from time to time:

Provided that the Generating Company, Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be specified by the Commission, together with the audited accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges.

11.3 The scope of the annual performance review, truing up and tariff determination shall be a comparison of the performance of the Generating Company, Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges and shall comprise of the following:

*a) **True-up:** a comparison of the audited performance of the Applicant for the Financial Year for which the true up is being carried out with the approved forecast for such previous Financial Year, subject to the prudence check;*

*b) **Annual Performance Review**: a comparison of the revised performance targets of the Applicant for the current Financial Year with the approved forecast in the Tariff Order corresponding to the Control Period for the current Financial Year subject to prudence check;*

*c) **Tariff determination** for the ensuing Year of the Control Period based on the revised forecast of the Aggregate Revenue Requirement for the Year;*

d) Review of compliance with directives issued by the Commission from time to time;

e) Other relevant details, if any.

11.4 Upon completion of the exercise, the Commission shall attribute any variations or expected variations in performance for variables specified under Regulation 12below, to factors within the control of the Applicant (controllable factors) or to factors beyond the control of the Applicant (uncontrollable factors):

Provided that any variations or expected variations in performance, for variables other than those specified under Regulation 12below shall be attributed entirely to controllable factors.

11.5 Upon completion of the exercise, the Commission shall pass an order recording:

a) Components of approved cost pertaining to the uncontrollable factors, which were not recovered during the previous Year, to be passed through in tariff as per Regulation 13 of these Regulations:

Provided that, for a Generating Company, the above exercise shall be in accordance with prevalent CERC Tariff Regulations.

b) Approved aggregate gain or loss to the Transmission Licensee or Distribution Licensee on account of controllable factors, and the amount of such gains or such losses that may be shared in accordance with Regulation 14of these Regulations:

Provided that, for a Generating Company, the above exercise shall be in accordance with prevalent CERC Tariff Regulations.

c) Carrying cost shall be allowed for a Generating Company, Transmission Licensee or Distribution Licensee on the amount of revenue gap for the period from the date on which such gap has become due, i.e., from the end of the Year for which true-up has been done, till the end of the Year in which it is addressed, on the basis of actual rate of loan taken by the Licensee to fund the deficit in revenue:

Provided that carrying cost on the amount of revenue gap shall be allowed subject to prudence check and submission of documentary evidence for having incurred the carrying cost in the years prior to the year in which the revenue gap is addressed:

Provided also that if no loan has been taken to fund revenue deficit, the Commission shall allow Carrying Cost on simple interest basis at one (1) Year State Bank of India (SBI) MCLR /any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on1st April of the relevant Year plus 100 basis points;

Provided further that in case of revenue surplus, the Commission shall charge the Licensee a Carrying Cost from the date on which such surplus has become due, i.e., from the end of the Year for which trueuphas been done, till the end of the Year in which it is addressed on simple interest basis at one(1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for 1 Year period, as may be, applicable as on 1st April of the relevant Year plus 100 basis points.

d) Revision of estimates and tariff for the ensuing Financial Year."

3.2. Approach for the True-up of the FY 2020-21 and FY 2021-22

Petitioner's submission:

The Petitioner has not submitted the True-Up Petition for FY 2020-21 and FY 2021-22. Further the Financial Accounts for FY 2020-21 & FY 2021-22 are completed. The CAG audit team is auditing the accounts. Upon completion of the audit of the Accounts for FY 2020-21 & FY 2021-22 the True-up Petitions for FY 2020-21 & FY 2021-22 will be submitted before the Hon'ble JERC by December 20, 2022.

Commission's analysis:

The Commission in its previous Orders had stressed upon the requirement of the audited accounts to reflect the true picture and bring in accuracy in the estimates made by the Commission. The JERC MYT Regulations, 2018 also require the licensee to file the True up along with the audited accounts in the filing.

The Commission now has received the true-up petition for FY 2020-21 and FY 2021-22 separately along with the CAG certificate. Therefore, the Commission will take up the True-up for FY 2020-21and FY 2021-22 separately after concluding the public hearing on the petition. However, the Commission has considered the data submitted for FY 2020-21 and FY 2021-22 on provisional basis for completing the APR of FY 2022-23 and ARR of FY 2023-24 dealt in subsequent chapters.

4. Chapter 4: Annual Performance Review of FY 2022-23

4.1. Applicable Provisions and Background

The MYT Order for each year of the Control Period from FY 2022-23 to FY 2024-25 was issued by the Commission on 31st March 2022 approving the Aggregate Revenue Requirement (ARR) and tariff for the FY 2022-23 (herein referred as "MYT Order").The Annual Performance Review for the FY 2022-23 is to be carried out in accordance with the Regulation 12 of the JERC MYT Regulations 2021:

"12. Annual Performance Review, Truing-up and tariff determination during the Control Period

12.1 The Generating Company, Transmission Licensee and Distribution Licensee shall be subject to annual performance review and truing up of expenses and revenue during the Control Period in accordance with these Regulations.

12.2 The Generating Company, Transmission Licensee and Distribution Licensee shall file an application for the annual performance review of the current year, truing up of the previous Year or the Year for which the audited accounts are available and determination of tariff for the ensuing Year on or before 30th November of each Year, in formats specified by the Commission from time to time:

Provided that the Generating Company, Transmission Licensee or Distribution Licensee, as the case may be, shall submit to the Commission information in such form as may be specified by the Commission, together with the audited accounts, extracts of books of account and such other details as the Commission may require to assess the reasons for and extent of any variation in financial performance from the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges.

12.3 The scope of the annual performance review, truing up and tariff determination shall be a comparison of the performance of the Generating Company, Transmission Licensee or Distribution Licensee with the approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges and shall comprise of the following:

...

***b) Annual Performance Review:** a comparison of the revised estimates of performance targets of the Applicant for the current Financial Year with the approved forecast in the Tariff Order corresponding to the Control Period for the current Financial Year subject to prudence check;*

........."

4.2. Approach for the Review for the FY 2022-23

The review of the Aggregate Revenue Requirement requires assessment of the quantum of energy sales, energy loss as well as the various cost elements like Power Purchase Cost, O&M Expenses, interest on long-term loans, interest on working capital loans, depreciation etc. The Annual Performance Review for the FY 2022-23 has been done based on the 9 months' actual data as provided by the Petitioner for the FY 2022-23 of the Power Purchase Quantum and the Cost, Energy Sales, Capitalisation etc. Based on such data the estimates for the remaining months of the financial year have been made. The various cost elements constituting the Aggregate Revenue Requirement have been approved based on the actual information submitted by the Petitioner, the JERC MYT Regulations, 2021 and on the basis of the norms approved in the MYT Order dated 31st March 2022.

4.3. Energy Sales

Petitioner's Submission

The Petitioner has submitted a revised estimate of energy sales as 4430.74 MUs for the FY 2022-23 against initial estimated sales of 4241.87 MUs approved by the Commission in MYT Order dated 31st March, 2022. The table below provides the details of category wise sales projected by the Petitioner for FY 2022-23:

Table 7: Sales projected by the Petitioner in the APR of FY 2022-23 (MUs)

Sr. No.	Category of Consumer	Approved in MYT Order	FY 2022-23 (H1)	FY 2022-23 (H2)	Submitted by Petitioner
A. LOW TENSION SUPPLY					
1	LTD/Domestic	1384.58	714.08	624.45	1338.53
2	LT-L.I.G (Low Income Group)	1.37	0.48	0.42	0.9
3	LTC/Commercial	472.52	237.67	259.28	496.95
4	LTI/Industrial	80.91	1.93	2.11	4.04
5	LT Mixed/LT-P Hotel Industries	4.48	43.92	47.15	91.07
6	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	18.08	8.16	10.34	18.5
7	Low Tension-AG/LT-AGA (Allied Activities)		0.63	0.80	1.43
8	LTPL Public lighting	29.61	29.97	17.60	47.57
9	LT Hoarding/Sign Board	0.16	0.13	0.17	0.3
B. HIGH TENSION SUPPLY					
10	HTD Domestic	0.38	0.18	0.19	0.37
11	HT Commercial	135.02	74.24	92.16	166.4
	HTI Industrial	1499.12	826.87	868.44	1695.31
12	High Tension-Ferro/SM.PI/SR	555.35	243.95	256.21	500.16
13	High Tension-AG/HT-AGP (Pump Sets/Irrigation)		2.89	3.43	6.32
14	High Tension-AG/HT-AG (Allied Activities)	15.54	6.61	7.86	14.47
15	Military Engineering Services/defense Establishments	26.96	16.12	15.75	31.87
C. TEMPORARY SUPPLY					
16	L.T. Temporary	9.77	1.78	2.19	3.97
17	H.T. Temporary	2.33	2.76	3.39	6.15
D. Single Point Supply					
18	Residential Complexes				
19	Commercial Complexes	5.69	2.63	3.78	6.41
20	Industrial Complexes				
	Total	**4,241.87**	**2215.01**	**2215.73**	**4430.74**

Commission's analysis

As per the data submitted by the Petitioner in the petition, the Commission noted that the Petitioner has projected the sales for H2 in line with the actual sales of H1. Further, the Commission sought the details of actual sales of initial 9 months in the deficiency note. Based on the analysis of the actual sales information for FY 2021-22 and the provisional information provided by the Petitioner for the initial 9 months of the FY 2022-23, the Commission has projected the sales for FY 2022-23 by extrapolating the actual sales data for initial 9 months.

The following table provides the energy sales approved by the Commission in the MYT Order, the Petitioner's submission and as now approved by the Commission:

Table 8: Sales approved by the Commission in the APR of FY 2022-23 (MUs)

Sr. No.	Category of Consumer	Approved in MYT Order	Sales data for initial 6 months	Approved by the Commission
A. LOW TENSION SUPPLY				
1	LTD/Domestic	1384.58	714.08	1382.87
2	LT-L.I.G (Low income Group)	1.37	0.48	0.93
3	LTC/Commercial	472.52	237.67	472.04
4	LTI/ Industrial	80.91	1.93	86.77
5	LT Mixed/ LT-P Hotel Industries	4.48	43.92	3.90
6	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	18.08	8.16	13.65
7	Low Tension-AG/LT-AGA (Allied Activities)		0.63	1.21
8	LTPL Public lighting	29.61	29.97	46.27
9	LT Hoarding /Sign Board	0.16	0.13	0.27
B. HIGH TENSION SUPPLY				
10	HTD Domestic	0.38	0.18	0.37
11	HT Commercial	135.02	74.24	153.10
	HTI Industrial	1499.12	826.87	1662.58
12	High Tension-Ferro/SM.PI/SR	555.35	243.95	486.38
13	High Tension-AG/HT-AGP (Pump Sets/Irrigation)		2.89	4.28
14	High Tension-AG/HT-AG (Allied Activities)	15.54	6.61	13.27
15	Military Engineering Services/defense Establishments	26.96	16.12	32.02
C. TEMPORARY SUPPLY				
16	L.T. Temporary	9.77	1.78	3.60
17	H.T. Temporary	2.33	2.76	5.20
D. Single Point Supply				
18	Residential Complexes			0.00
19	Commercial Complexes	5.69	2.63	5.38
20	Industrial Complexes			0.00
	Total	**4,241.87**	**2215.01**	**4374.09**

The Commission approves revised energy sales of 4374.09 MUs in the APR of FY 2022-23.

4.4. Open Access Sales and Purchase

Petitioner's Submission

The Petitioner has not projected or scheduled any energy sales/purchase under Open Access in the FY 2022-23.

Commission's analysis

As the Petitioner has made no submission in this regard, therefore, the Commission approves NIL Open Access Sale and Purchase accordingly.

The Commission now approves NIL open access sales and purchase in the APR of FY 2022-23.

4.5. Inter-State Transmission Loss

Petitioner's Submission

The Petitioner has considered the actual transmission losses of FY 2022-23 H1 for the FY 2022-23. Accordingly, Inter-state transmission losses for FY 2022-23 have been considered as under:

Table 9: Inter-State Transmission Losses projected by Petitioner for FY 2022-23 (%)

Particulars	Approved in MYT Order		FY 2022-23 (APR)		FY 2022-23 Revised Estimate
	WR	SR	WR	SR	Total
Inter-State Transmission Loss (%)	3.34%	7.92%	2.89%	6.97%	3.55%

Commission's analysis

The Commission observed that quantum of losses submitted by the Petitioner is 86.41 MUs for H1 of FY 2022-23 and has projected the losses of H2 in the same proportion. The Commission find the Petitioner's approach prudent and has decided to approve the inter-state transmission loss as sought by the Petitioner during the APR of FY 2022-23.

The table below provides the Inter-State Transmission Losses submitted and now approved by the Commission.

Table 10: Inter-State Transmission Loss approved by the Commission for FY 2022-23 (%)

Particulars	Approved in MYT Order		Petitioner's Submission		Approved by the Commission	
	WR	SR	WR	SR	WR	SR
Inter-State Transmission Loss (%)	3.34%	7.92%	2.89%	6.97%	2.89%	6.97%

The Commission approves the Inter-State Transmission Loss as 2.89% for the western region and 6.97% for the southern region in the APR of FY 2022-23.

4.6. Intra-State Transmission and Distribution (T&D) loss

Petitioner's Submission

The Petitioner has proposed Intra-State T&D loss level at 8.45% against an approved loss of 10.25% in the MYT Order dated 31st March 2022. Further, the Petitioner submitted that for H1 of FY 2022-23 the actual distribution loss arrived at 8.11%.

Commission's analysis

The Commission had approved loss level of 10.25% for FY 2022-23 in the Business Plan Order dated 31st March 2022. However, while approving the T&D loss trajectory for the 3rd Control Period, the Petitioner has only submitted the details of actual T&D losses achieved in the 2nd MYT Control Period for FY 2020-21. Therefore, the Commission could not finalize the T&D loss trajectory for the 3rd control period and approved the trajectory on the provisional basis.

Now, the Petitioner has filed the true-up for FY 2017-18 to FY 2021-22 and have provided the actual T&D losses for the past years. The T&D losses approved by the Commission in the previous Control Period vis-à-vis T&D losses achieved by the Petitioner during the same period is given in the following table:

Table 11: T&D losses approved by the Commission in the 2nd MYT Control Period vis-à-vis T&D losses achieved by the Petitioner

	T&D loss (%)	
	Approved[1]	Actual (A)
FY 2019-20	10.75%	15.03%
FY 2020-21	10.50%	7.74%
FY 2021-22	10.25%	8.46%

From the above, it can be observed that there is downward trend in the T&D loss trajectory and losses for FY 2020-21 seems to be outlier. Therefore, the Commission has considered the Petitioner's submission and have approved the T&D loss of 8.45% for FY 2022-23. Further, the Commission would like to point out that approx. 54% of the total sales is at HT levels, where losses are very low. In view of the capital expenditure proposed by the Petitioner and nature of schemes planned to be carried out, the Commission opines that the Petitioner should be able to further reduce T&D losses by 0.25% annually in the 3rd MYT Control Period. The T&D loss trajectory approved by the Commission for the 3rd control period is provided in the following table:

Table 12: T&D loss trajectory approved by the Commission

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	T&D loss trajectory (%)	8.45%	8.20%	7.95%

The Commission approves revised Intra-State T&D loss of 8.45% in the APR of FY 2022-23.

4.7. Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy balance as shown in the table below:

Table 13: Energy Balance (MUs) submitted by Petitioner

Sr. No.	Particulars	APR		
		FY 2022-23 H1	FY 2022-23 H2	FY 2022-23
A)	**ENERGY REQUIREMENT**			
1	Energy sales to metered category within the State	2,215.01	2,215.73	4,430.74
2	Total sales within the State	**2,215.01**	**2,215.73**	**4,430.74**
3	Distribution Losses (MU)	195.61	213.12	408.73
4	Distribution Losses (%)	8.11%	8.77%	8.45%
5	Energy required at Discom Periphery	**2,410.62**	**2,428.85**	**4,839.47**
6	Intra-State Transmission Losses	-		
7	Energy Required at State Periphery for own sale	**2,410.62**	**2,428.85**	**4,839.47**
8	Sales to common pool consumers	0.78	-	0.78
9	Sales outside state	158.39	0.00	158.39
10	**Total Energy Requirement at State Periphery**	**2,251.45**	**2,428.85**	**4,680.30**
B)	**ENERGY AVAILABILITY**			
1	Availability from firm sources outside state	**2,439.30**	**2,037.40**	**4,476.70**
2	Availability from UI Over-drawal/ Under-drawal	*44.20*	-	*44.20*
3	Net Purchase from open market	*-48.68*	*348.84*	*300.16*
5	**Total Availability of Energy from outside the state**	**2,434.82**	**2,386.24**	**4,821.06**

[1]Business Plan Order dated 16 November 2018

Sr. No.	Particulars	APR		
		FY 2022-23 H1	FY 2022-23 H2	FY 2022-23
6	**PGCIL Losses - MUs**	86.41	**72.31**	158.72
7	**PGCIL Losses - %**	3.55%	3.55%	3.55%
8	**Total Availability of Energy at State Periphery from outside state after Interstate Losses**	2,348.41	2,313.93	4,662.34
9	Availability from firm sources inside the state	62.21	114.92	177.13
10	**Total Availability of Energy for the State**	**2,410.62**	**2,428.85**	**4,839.47**
11	**Surplus / (Deficit)**	-	-	-

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales. The following table provides the Energy Balance now approved by the Commission for FY 2022-23:

Table 14: Energy Balance (MU) approved by Commission

S. No.	Particulars	Approved by the Commission
(I)	**Energy Requirement**	
1	Energy sales within the State (A)	4,374.09
2	T&D Loss (%) (B)	8.45%
3	**Energy required at State Periphery (C = A/(1-B))**	**4,777.81**
4	Within State Generation (Co-Gen) (D)	121.30
5	**Net energy required at State Periphery (E = C – D)**	**4,656.51**
(II)	**Energy Availability**	
1	Central Generating Stations including UI over/under drawl (F)	3,919.23
2	Renewable Power (G)	737.29
3	**Energy available at State Periphery (H = F + G)**	**4,656.51**
4	(Sale)/ Purchase in Open Market (I = E - H)	-
5	**Net energy available at State Periphery (J = H + I)**	**4,656.51**

The Commission approves energy requirement at state periphery of 4656.51 MUs in the APR of FY 2022-23.

4.8. Power Purchase Quantum & Cost

Petitioner's Submission:

The Petitioner meets its total energy requirement from its allocation from the Central Generating Stations (CGS), state-based Co-generation facilities, Power Exchanges etc. EDG receives power from CGS like NTPC and NPCIL as per allocation from time to time. The power purchases from other sources such as Co-generation has been considered as per respective PPAs. Also, Renewable Power has been procured from NVVNL, SECI and Manikaran Power, APPCPL, Net Metering and Hindustan Waste Treatment Plant.

The quantum and cost of power purchase for FY 2022-23 have been estimated in the following manner:

The Petitioner has projected the quantum of power purchase by considering the actual power purchase for the 1st half of the year FY 2022-23 and for the purpose of the estimation of purchase quantum for H2 for FY 2022-23, the Petitioner has considered the revised estimates of power purchase quantum based on half-yearly power purchase quantum in FY 2022-23. The below table shows the summary of Power Purchase (at Goa periphery) from various sources along with their costs for H1 of FY 2022-23 including Transmission Charges, Banking, Over-drawl and purchase from traders:

Table 15: Power Purchase Summary of H1 of FY 2022-23 as submitted by the Petitioner

Particulars	Gross Purchase	Cost
	MUs	INR Cr.
NTPC	1,970.25	713.04
NPCIL	122.96	35.33
IEX (Net of Purchase and Sales)	(90.03)	(22.18)
IEX Purchase (Peak Hrs)	*68.36*	*51.35*
IEX Sale (Off Peak Hrs)	*158.39*	*73.53*
Traders	41.35	47.28
Net Over drawal	44.20	38.93
Co-Generation	46.56	10.14
Renewable	413.69	185.66
Transmission Charges		145.25
Banking of Power (Net)	(51.95)	0.06
Revenue recovered from HT Consumer for dedicated Power Purchase		33.34
Total	**2497.03**	**1,120.16**

During the peak Hours in Summer season (March-May 2022) Goa was experiencing shortfall of Power to the tune of 125 MW. The shortfall of power during this deficit period was to the tune of 125 MW which was mainly met by Goa through purchase of power through IEX (through all their segment such as DAM, RTM, GDAM, TAM etc).

From the month of Mar'22, the rate on the Indian Energy Exchange during deficit Hours was Rs 12.53/kWh (Inclusive of losses & Trading Margins) since all India demand had increased due to prevalent summer season and there was a shortage of power in the country mainly due to the following reasons,

(i) High demand for domestic coal and shortage of International Coal which has increased the market clearing prices in Exchange for the Power.

(ii) Shortage of Gas due to Ukraine crisis as a result most of Gas units were under shut down or running below their capacity.

(iii) Some Thermal Plants had gone on planned or forced outage resulting in dropping the Goa's schedule from ISGS by around 40 MW.

In view of high All India Demand and due to low generation, the grid frequency was in the range of 49.60 – 49.90 Hz during the evening hours. As a result of which the Regional Load Despatch Center (RLDC) had issued directions to all the State Load Despatch Centers (SLDCs for mandatory load shedding to maintain their drawal to the schedule. Hence due to non-clearing of bids in IEX due to exorbitantly high rate of Power i.e. @ 12.53/kWh and directions from RLDCs for restricting the demand to the allocated schedule, Goa was forced to impose load restrictions on Industrial consumers to the tune of 100-125 MW depending upon the schedule.

In view of smooth functioning of the HT industries, HT consumers of Goa had insisted EDG to buy costly power from any source wherein the cost of additional sourcing cost power will be borne by them at the flat rate which will be very reasonable as compared to the power generated through the DG sets. In this regard the EDG has got the approval from the Hon'ble Commission and EDG has purchased the Power and recovered the same from the HT Consumers of Rs. 33.34 Crore.

EDG procured power from GMR where the power was arranged through banking arrangement for compliance of Hydro Purchase Obligation for FY 2022-23. Accordingly, EDG complied the HPO target with surplus of 0.83 MUs.

The source wise details of Power Purchase Quantum and its cost are covered in Format 3 of the Tariff Filing Formats.

EDG on a real time basis has also overdrawn/ under drawn power from grid. Reactive charges have been adjusted in the over-drawl and under-drawl charges. The details of the same for FY 2022-23 H1 are provided in the table given below:

Table 16: DSM Power (Over-drawl & Under-drawl) Charges for H1 of FY 2022-23

Region	Over drawal		Under drawal		Net Drawal	
	INR Crore	MUs	INR Crore	MUs	INR Crore	MUs
April	22.04	19.12	0.00	0.00	22.04	19.12
May	4.82	7.14	0.09	0.47	4.74	6.66
June	3.61	4.50	0.00	0.00	3.61	4.50
July	5.32	8.85	0.00	0.00	5.32	8.85
August	1.83	3.02	0.00	0.00	1.83	3.02
September	1.48	2.34	0.08	0.31	1.40	2.04
Total	**39.09**	**44.98**	**0.17**	**0.78**	**38.93**	**44.20**

Transmission Charges for FY 2022-23 of H1: The transmission charges for the H1 of FY 2022-23 comprises of transmission charges for Western Region and Southern Region. The Transmission charge comes to around Rs. 145.25 Cr. The same is considered for FY 2022-23 H2 resulting in Rs. 290.50 Cr.

Power Purchase Fixed Cost for FY 2022-23: As CERC has still not issued the Order for most of the Plant, ED-Goa has considered actual fixed charges paid to the plant in H1 of FY 2022-23 to arrive at the revised projections of base year FY 2022-23 for respective Central Generating Stations.

Power Purchase Variable Cost for FY 2022-23: The Petitioner has considered the average of actual per unit variable costs for FY 2021-22 and escalated the same with 7 % for the revised projections of FY 2022-23.

In line with the foregoing paragraphs, the total estimated Power Purchase Quantum & Cost for FY 2022-23 as well as that approved by the Hon'ble Commission in MYT Order dated 31st March 2022 is summarized in the table below:

Table 17: Power Purchase cost submitted by Petitioner for FY 2022-23 (In INR Cr)

Particulars	Approved in MYT Order			Revised Projections for FY 2022-23		
	Gross Purchase	Cost	Rate	Gross Purchase	Cost	Rate
	MUs	INR Cr.	Rs./kWh	MUs	INR Cr.	Rs./kWh
NTPC	3445.35	1,124.26	3.26	3574.89	1357.66	3.62
NPCIL	215.19	67.22	3.12	188.77	48.64	2.87
IEX (Net of Purchase and Sales)	139.59	60.32	4.32	258.81	113.55	2.46
IEX Purchase (Peak Hrs)	139.59	60.32	4.32	417.20	187.08	7.51
IEX Sale (Off Peak Hrs)				158.39	73.53	4.64
Traders				41.35	47.28	11.43
Net Over drawal				44.20	38.93	8.88

Particulars	Approved in MYT Order			Revised Projections for FY 2022-23		
	Gross Purchase	Cost	Rate	Gross Purchase	Cost	Rate
	MUs	INR Cr.	Rs./kWh	MUs	INR Cr.	Rs./kWh
Co-Generation	149.79	35.95	2.40	139.13	32.35	2.18
Renewable	776.40	325.64	4.19	754.67	334.33	4.49
Transmission		226.15			290.50	
Banking of Power (Net)				-3.63	0.29	
Revenue recovered from HT Consumer for dedicated Power Purchase					33.34	
Total	**4726.31**	**1839.53**	**3.89**	**4,998.19**	**2,230.19**	**4.46**

It is submitted that net power purchase at state periphery after losses is 4,662.34 MU with total power purchase cost of Rs. 2230.19 Cr. and the average power purchase cost works out to Rs. 4.46/kWh against approved net power purchase cost of Rs. 3.89/kWh for FY 2022-23.

Commission's analysis:

The Commission while estimating the power purchase quantum and cost for FY 2022-23 has considered the actual quantum and cost of power till December 2022, as submitted by the Petitioner. The Commission has projected the quantum of energy and cost for the remaining 3 months of the FY 2022-23. The methodology followed for projecting the quantum and cost for the remaining months has been discussed as follows:

4.8.1. Power Purchase Quantum

Availability of energy from NTPC and NPCIL Stations:

The Commission analysed the energy availability from NTPC and NPCIL Power Stations for the last 2 years and found it in line with the Petitioner's projections for FY 2022-23. Therefore, the Commission has estimated energy availability for the last 3 months in line with the Petitioner's Submission.

Availability of energy from Vedanta and Goa Sponge Stations

The Commission analysed the energy availability from within state generation for the last 2 years and found the energy availability projections on the lower side vis-à-vis the actual generation of last 2 years. Further, the actual availability from these plants for the initial 9 month is also on the lower side. Therefore, the Commission has estimated energy availability for the last 3 months by extrapolating the actual initial 9 months generation.

4.8.2. Power Purchase Cost

The Commission has computed the power purchase cost for the APR of FY 2022-23 based on the following assumptions:

Variable Charges:

- The Variable Cost for existing plants has been considered as per actuals for the initial 9 months. For the last 3 months, the Commission has considered the variable charges as per the Petitioner submission as they were in line with the actual per unit cost of initial 9 months.

Fixed Charges:

- The fixed costs have been considered based on the tariff Orders issued by the CERC for respective Central Generating Stations.
- The Fixed cost has been apportioned on the basis of Petitioner's share in each power station and Normative Annual Plant Availability approved by CERC/JERC.

UI over-drawl/under-drawl:

The UI over-drawl/under-drawl quantum and amount has been considered as per Petitioner's submission and the same would be trued-up at the time of True-up based on the UI bills.

Other Charges:

The Petitioner has submitted actual Other Charges and supplementary charges as applicable for initial 9 months of FY 2022-23. The same has been considered subjected to the True-up for FY 2022-23.

4.8.3. Transmission Charges

The Commission has estimated the transmission charges payable to PGCIL for FY 2022-23 based on the actual transmission charges paid in initial 9 months of FY 2022-23 and apportioning it based on projected power purchase at ex-bus periphery from CGS.

4.8.4. Total Power Purchase Cost

The following table provides the Power Purchase Quantum and Cost approved by the Commission after MOD for FY 2022-23:

Table 18: Power Purchase Quantum (MU) and cost (INR Cr) approved by the Commission

Details of the stations	PP at state periphery (MU)	Variable Charges (INR Crore)	Annual Fixed charges (INR Cr.)	Other charges	Total (INR Cr.)
NTPC	**3,681.50**	**927.15**	**425.19**	**92.02**	**1,444.36**
KSTPS	1,631.78	254.34	110.59	55.02	419.95
VSTPS - I	266.97	43.41	23.95	7.16	74.52
VSTPS - II	112.94	17.38	8.06	4.10	29.54
VSTPS -III	73.70	11.45	9.83	1.00	22.28
VSTPS-IV	95.83	14.83	17.49	3.88	36.20
VSTPS-V	41.80	6.70	8.74	0.56	15.99
KGPP	-	-	7.87	3.46	11.32
GGPP	-	-	9.10	0.40	9.50
SIPAT- I	194.68	43.74	25.51	8.96	78.20
KSTPS-VII	33.76	5.05	6.35	0.73	12.12
RSTPS	612.13	277.30	50.05	1.76	329.11
SIPAT- II	76.63	19.40	9.66	(1.90)	27.16
Solapur	62.08	31.95	25.33	0.19	57.47
Gadarwara	117.34	49.32	31.65	2.15	83.13
Lara	79.87	23.29	17.54	3.22	44.06
Khargone	59.76	30.97	22.42	1.37	54.76
Mouda I	94.60	41.54	19.68	(3.03)	58.20
Mouda II	127.64	56.47	21.36	3.01	80.84
NPCIL	**222.03**	**65.85**			**65.85**
KAPS	109.81	25.95			25.95
TAPS	112.22	39.90			39.90
Traders	**(42.93)**	**40.70**			**40.70**

Details of the stations	PP at state periphery (MU)	Variable Charges (INR Crore)	Annual Fixed charges (INR Cr.)	Other charges	Total (INR Cr.)
a) IEX Purchase	162.94	101.70			101.70
b) IEX Sales	238.22	104.98			104.98
Traders Drawal/(Injection)	32.35	43.98			43.98
Net UI (Over/ Under Drawal)	**62.91**	**50.11**			**50.11**
Banking of Power	**(4.29)**	**0.24**			**0.24**
Co- Generation	**121.30**	**27.99**			**27.99**
Vedanta Plant-1	57.67	13.74			13.74
Vedanta Plant -2	59.66	13.30			13.30
Goa Sponge and private limited	3.97	0.95			0.95
RPO Obligation	**737.29**	**327.21**			**327.21**
Solar	**312.69**	**155.32**			**155.32**
NVVNL Solar	13.22	7.27			7.27
Solar STOA	216.06	108.89			108.89
SECI Solar	53.42	29.38			29.38
Net Metering	30.00	9.78			9.78
Non-Solar	**424.60**	**171.89**			**171.89**
Non Solar - SECI Wind Tranche II LTOA	137.63	37.30			37.30
STOA (Non Solar)	240.85	121.63			121.63
SECI Tranche-VI	38.12	8.96			8.96
Hindustan waste treatment plant Goa	8.00	4.00			4.00
Total	**4,777.81**	**1,439.23**	**425.19**	**92.02**	**1,956.44**
PGCIL Charges		303.70			303.70
Total Cost	**4,777.81**	**1,742.93**	**425.19**	**92.02**	**2,260.14**

The Commission approves the revised quantum of power purchase as 4,777.81 MUs at state periphery with total cost of INR 2260.14 Cr in the APR of FY 2022-23. This includes other charges and supplementary charges which include expenses such as past arrears, water charges, taxes etc.

4.9. Renewable Purchase Obligation

Petitioner's Submission:

The Petitioner has submitted it envisages to meet its RPO obligation through purchase of physical renewable power. Further, after considering all the proposed tied-up renewable energy, ED-Goa proposes to meet any shortfall to fulfil the RPO obligation through purchase of REC certificate. Accordingly, the Petitioner has submitted its RPO plan for the APR of FY 2022-23 as follows:

Table 19: RPO plan submitted by the Petitioner for FY 2022-23 (MU)

Sr. No.	Description	Unit	Revised Projections
			FY 2022-23
1	**Sales Within State**	**MUs**	**4241.87**
2	**RPO Obligation**	**%**	**18.35**
	- Solar	%	9.00
	- Non Solar	%	9.00
	HPO	%	0.35
3	**RPO Obligation**	**MUs**	
	- Solar	MUs	381.77
	- Non Solar	MUs	381.77
	HPO	MUs	14.85
4	**Power Purchase**	**MUs**	**770.34**
	- Solar	MUs	314.43
	- Non Solar	MUs	440.24
	HPO	MUs	15.68

Commission's analysis:

The Commission has approved the Renewable Purchase Obligation (RPO) for FY 2022-23 considering the JERC (Procurement of Renewable Energy) Regulations, 2010, as amended from time to time. Further, the cumulative backlog of solar and non-solar compliance up to FY 2021-22 has been considered as per the true-up order of FY 2019-20 and the provisional information for FY 2020-21 and FY 2021-22 as submitted by the Petitioner. Accordingly, the RPO approved by the Commission in the APR of FY 2022-23 is as follows:

Table 20: Renewable Purchase Obligation (RPO) approved by the Commission for FY 2022-23

Particulars	FY 2020-21	FY 2021-22	FY 2022-23
Sales within State (MU) (A)	3767.16	4,018.22	4,374.09
Hydro Power available at State Periphery (MU) (B)	0.00	-	-
T&D Loss (%) (C)	7.74%	8.46%	8.45%
T&D Loss (MU) (D = B * C)	0.00	-	-
Hydro Power Consumed (E = B - D)	0.00	-	-
Conventional Power Consumed (F = A - E)	**3767.16**	**4,018.22**	**4,374.09**
RPO obligation (%)	**14.10%**	**17%**	**18%**
Solar (G)	6.10%	8.00%	9.00%
Non-Solar (H)	8.00%	9.00%	9.35%
RPO obligation for the year (MU)	**531.17**	**683.10**	**802.65**
Solar (F * G)	229.80	321.46	393.67
Non-Solar (F * H)	301.37	361.64	408.98
RPO Compliance from Physical Power (MU)	**506.83**	**626.81**	**737.29**
Solar	148.16	307.90	312.69
Non-Solar	358.67	318.91	424.60
Standalone RPO Compliance Backlog (MU)	**81.64**	**56.29**	**80.98**
Solar	81.64	13.56	80.98
Non-Solar	-	42.73	-
Cumulative RPO Compliance Backlog (MU)	**145.42**	**201.70**	**267.06**
Solar	81.64	95.19	176.17
Non-Solar	63.78	106.51	90.89

The Commission notes that there is a net shortfall in RPO compliance for FY 2022-23 (80.98 MU) and cumulative shortfall of 267.06 MU till FY 2022-23. The Commission also directs the Petitioner to complete the RPO obligation on priority.

4.10. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 61 of the JERC MYT Regulation, 2021 states the following:

"61.1 The Operation and Maintenance Expenses for the Retail Supply Business shall be computed in accordance with this Regulation.

61.2 O&M Expenses shall comprise of the following:

a) Employee expenses - salaries, wages, pension contribution and other employee costs;

b) Administrative and General expenses including insurance charges if any; and

c) Repairs and Maintenance expenses.

61.3 The Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Distribution Licensee, estimates of the actual for the Base Year, prudence check and any other factors considered appropriate by the Commission.

61.4 O&M expenses for the nth Year of the Control Period shall be approved based on the formula given below:

O&Mn = (R&Mn + EMPn + A&Gn) x (1 - Xn) + Terminal Liabilities

Where,

R&Mn = K x GFAn-1 x (1+WPIinflation)

EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)

A&Gn = (A&Gn-1) x (1+CPIinflation)

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expensesvis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPI inflation – is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

WPI inflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

EMPn – Employee expenses of the Distribution Licensee for the nth Year;

A&Gn – Administrative and General expenses of the Distribution Licensee for the nth Year;

R&Mn – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GFAn-1 – Gross Fixed Asset of the Distribution Licensee for the n-1th Year;

Xn is an efficiency factor for nth Year. Value of Xn shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

Gn is a growth factor for the nth Year. Value of Gn shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate:

Provided that in case the Licensee has been in operation for less than three (3) Years as on the date of effectiveness of these Regulations, the O&M Expenses shall be determined on a case to case basis.

61.5 Terminal liabilities of employees of Licensee including pension expenses etc. shall be approved as per actuals submitted by the Licensee, subject to prudence check or be established through actuarial studies. Additionally, any variation due to changes recommended by the pay commission shall be allowed separately by the Commission, subject to prudence check.

61.6 For the purpose of estimation, the same value of factors – CPI inflation and WPI inflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation during the truing up exercise for the Year for which true up is being carried out and true up the O&M Expenses for that Year, only to the extent of inflation.

Provided that at the time of truing up, the variation in the normative and actual O&M expenses shall be dealt in accordance with Regulation 15."

4.10.1. Employee Expenses

Petitioner's Submission

The Petitioner has projected the employee expenses for FY 2022-23 as INR 408.71 crore as against the approved employee expenses of INR 344.56 Crore in the MYT Order.

Commission's analysis

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the JERC MYT Regulations, 2021 stipulates the following:

"6. Values for Base Year

6.1 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts or provisional accounts of last three (3) Years, and other factors considered relevant by the Commission:

Provided that, in absence of availability of audited accounts or provisional accounts of last three (3) Years, the Commission may benchmark the parameters with other similar utilities to establish the values for Base Year:

Provided further that the Commission may change the values for Base Year and consequently the trajectory of parameters for Control Period, considering the actual figures from audited accounts."

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the employee expenses trajectory on provisional basis. The Commission now has finalized the true-up of FY 2017-18, FY 2018-19 and FY 2019-20 and has also received the audited accounts of FY 2020-21 and FY 2021-22. Therefore, the Commission finds it prudent to revise the employee expenses trajectory for the 3rd control period. Therefore, the Commission has considered the actual audited figures of employee expenses from FY 2018-19, FY 2019-20 and FY 2020-21 as follows:

Table 21: Computation of Base Employee Expenses (INR Cr.)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Base Employee Expenses (including impact of 7th Pay Commission Arrears and Terminal Benefits)	325.73	340.39	332.21
Less: Impact of 7th Pay Commission Arrears	-	-	-
Less: Terminal Benefits	3.98	3.77	3.43
Employee Expenses	**321.75**	**336.62**	**328.78**
Base Employee Expenses (Avg.)		**329.05**	
CPI (FY 2017-18 to FY 2019-20)		**5.35%**	
CPI (FY 2018-19 to FY 2020-21)		**6.00%**	
Approved Base Employee Expenses		**367.47**	

The average of these three years i.e. FY 2018-19 to FY 2020-21 has been considered as employee expenses for the FY 2019-20. This has been escalated with the average CPI Inflation of the last two years to arrive at the employee expenses for the Base Year i.e. FY 2021-22. The resultant employee expenses of the Base Year have been escalated by Growth Rate as per manpower submitted by the Petitioner and the average CPI Inflation of the last three years to arrive upon the employee expenses of FY 2022-23 and FY 2023-24. The Terminal Benefits for each year has been allowed separately based on the average of Terminal Benefits from FY 2018-19 to FY 2020-21 as per the audited accounts. The same shall be allowed as per actuals during the time of truing up of the respective years. The CPI inflation has been computed as follows:

Table 22: CPI inflation computed for 3rd Control Period

<table>
<tr><th>FY</th><th>Average of (April – March)</th><th>Increase in CPI Index</th><th colspan="2">Average increase In CPI indices over 3 year</th></tr>
<tr><td>FY 2017-18</td><td>284.42</td><td></td><td rowspan="4">6.00%</td><td></td></tr>
<tr><td>FY 2018-19</td><td>299.92</td><td>5.45%</td><td rowspan="4">5.89%</td></tr>
<tr><td>FY 2019-20</td><td>322.50</td><td>7.53%</td></tr>
<tr><td>FY 2020-21</td><td>338.69</td><td>5.02%</td></tr>
<tr><td>FY 2021-22</td><td>356.06</td><td>5.13%</td><td></td></tr>
</table>

Further, the Petitioner has provided the details of manpower details including the recruitment and retirement for FY 2022-23 and FY 2023-24. The Commission has considered the same while approving the normative employee expenses for FY 2022-23 and FY 2023-24. For the FY 2024-25, the Commission has considered the growth rate of Nil subject to true-up. The table below provides the manpower details for the control period:

Table 23: Manpower plan submitted by the Petitioner for the Control period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening Employee	5920	6281	6372
Recruitment	434	255	-
Retirement	73	164	-
Closing Employee	6281	6372	6372
Growth rate	**6.10%**	**1.45%**	**0.00%**

Accordingly, the employee expenses approved by the Commission in the APR of FY 2022-23 have been provided in the following table:

Table 24: Employee Expense approved by the Commission for 3rd Control Period

Particulars	Base Year (FY 2021-22)	FY 2022-23	FY 2023-24	FY 2024-25
Gn (Growth factor as per the Manpower Plan submitted by the Petitioner)		6.10%	1.45%	0.00%
CPI (3 previous year avg.) (in %)		5.89%	5.89%	5.89%
Base Employee Expenses (INR Cr)	**367.47**	**412.85**	**443.52**	**469.65**
Terminal Benefits		3.73	3.73	3.73
Total Employee Expenses		**416.58**	**447.25**	**473.38**

The Commission approves the revised Employee Expenses of INR 416.58 Crore in the APR of FY 2022-23.

4.10.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has projected the A&G expenses of INR 33.74 crore vis-à-vis the approved A&G Expenses of INR 34.06 crore in the MYT Order.

Commission's analysis

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the A&G expenses trajectory on provisional basis. The Commission now has finalized the true-up of FY 2017-18, FY 2018-19 and FY 2019-20 and has also received the audited accounts of FY 2020-21 and FY 2021-22. Therefore, the Commission finds it prudent to revise the A&G expenses trajectory for the 3rd control period. The Commission has considered the audited figures of A&G expenses from FY 2018-19 to FY 2020-21as follows:

Table 25: Actual A&G Expenses from FY 2018-19 to FY 2020-21 (INR Crore)

Particulars	As per Audited Accounts
FY 2018-19	27.42
FY 2019-20	26.91
FY 2020-21	26.20
Avg. A&G expenses	**26.84**
CPI (FY 2017-18 to FY 2019-20)	**5.35%**
CPI (FY 2018-19 to FY 2020-21)	**6.00%**
Approved Base A&G Expenses	**29.98**

The average A&G expenses estimate has been escalated by the average CPI Inflation of the last three years to arrive at the A&G expenses for the Base Year i.e. FY 2021-22. The resultant A&G expenses of the Base Year has been escalated by the average CPI Inflation of the last three years to arrive upon the A&G expenses of each year of the3rdControl Period. The A&G expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 26: A&G Expense approved by the Commission for 3rd Control Period

Particular	Base Year	ARR		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
CPI (3 previous year avg.) (in %)		5.89%	5.89%	5.89%
Total A&G Expenses	**29.98**	**31.74**	**33.61**	**35.60**

Therefore, the Commission approves the revised Administrative & General (A&G) expenses of INR 31.74 Crore in the APR of FY 2022-23.

4.10.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has projected the R&M Expenses of INR 54.62 Crore in the APR of FY 2022-23 against the approved R&M Expenses of INR 55.33 crore in the MYT Order.

Commission's analysis

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the A&G expenses trajectory on provisional basis. The Commission now has finalized the true-up of FY 2017-18, FY 2018-19 and FY 2019-20 and has also received the audited accounts of FY 2020-21 and FY 2021-22. Further, the Commission has noted that due to the impact of COVID-19 very minimal R&M activities were undertaken during the financial year FY 2020-21. Therefore, the 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2017-18, FY 2018-19 and FY 2019-20 and averaged for three years. The 'K' factor has been computed as follows:

Table 27: 'K' computation by the Commission for 3rd MYT Control Period

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
R&M Expenses	27.05	26.32	32.98
Opening GFA (GFAn-1)	1216.92	1236.61	1274.13
K Factor (%)	2.22%	2.13%	2.59%
K Factor Approved by the Commission (Average of 3 years) (%)			**2.31%**

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for the (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for each year of the Control Period. The WPI Inflation has been computed as follows:

Table 28: WPI inflation computed for 3rd MYT Control Period

FY	Average of (April – March)	Increase in WPI Index	Average increase In CPI indices over 3 year
FY 2018-19	119.79		5.32%
FY 2019-20	121.80	1.68%	
FY 2020-21	123.38	1.29%	
FY 2021-22	139.41	13.00%	

The R&M expenses approved by the Commission for each year of the 3rdMYT Control Period have been provided in the following table:

Table 29: R&M Expense approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening GFA (GFAn-1)	1606.92	2008.54	2732.13
K Factor (%)	2.31%	2.31%	2.31%
Avg. WPI Inflation (%)	5.32%	5.32%	5.32%
R&M Expenses = K x (GFA n-1) x (1+WPIinflation)	**39.15**	**48.93**	**66.56**

The Commission therefore approves the revised Repair & Maintenance (R&M) expenses of INR 39.15 Crore in the APR of FY 2022-23.

4.10.4. Summary of O&M Expenses

The Summary of O&M expenses projected by the Petitioner and approved by the Commission in the APR of FY 2022-23 have been provided in the following table:

Table 30: Summary of O&M expenses approved by the Commission for FY 2022-23 (in INR Cr.)

Particulars	Petitioner's Submission	Approved by the Commission
Employee Expenses	408.71	416.58
A&G expenses	33.74	31.74
R&M Expenses	54.62	39.15
Total O&M expenses	**497.07**	**487.47**

The Commission approves the O&M Expenses of INR 487.47 crore in the APR of FY 2022-23.

4.11. Capital Expenditure & Capitalisation

Petitioner's Submission

The Petitioner has submitted capitalization of INR401.62 Crore during the year against approved capitalisation of INR950.92 Crore in the MYT Order dated 31st March 2022. The table below provides the summary of capital expenditure and capitalisation undertaken by the department during FY 2022-23:

Table 31: Details of capital expenditure and capitalisation submitted by the Petitioner for FY 2022-23 (INR Crore)

Sr. No.	Name of scheme	FY 2022-23			
		Approved in MYT Order		Revised Estimates	
		Capex	Capitalisation	Capex	Capitalisation
Existing Schemes					
A1	Schedule Tribe Development Scheme (P)			41.24	65.70
A2	Infrastructure development through Electricity Duty (Plan)	107.78	156.78	142.04	103.74
A3	Erection and Augmentation of 33/11 KV S/S line (Plan)			5.00	5.00
A4	Normal Development Schemes (Plan)	6.00	11.00	6.00	6.00
A5	System Improvement Schemes (Plan)			33.77	31.30
A6	Construction of staff quarters and office buildings (Plan)	0.50	0.12	2.00	2.00
A7	Strengthening of 220 KV Transmission Network			11.74	11.74
A8	Erection of 220/110/33/11 KV Sub-Station at Verna (New)			-	-
A9	Restructured Accelerated Power Development and Reforms Programme Part A			10.00	-
A10	Underground Cabling		19.95	162.10	54.54
A11	R-APDRP Part B / IPDS	15.00	22.00	2.00	18.00
A12	EHV new Transmission / Sub-Station / Capacitor banks schemes			-	-
B1	Smart grid Development of existing network			-	-
B2	Sub-transmission and distribution improvement scheme			79.00	89.00
	Total	**128.28**	**209.85**	**494.89**	**387.22**
New Schemes					
Projects with Administrative approval		**86.42**	**86.42**	**21.00**	**-**
Projects Approved by EFC		**387.34**	**387.34**	**54.00**	**-**
Projects tendered (To start next year)		**103.94**	**83.94**	**37.40**	**14.40**
REVAMPED Distribution Projects					
1	Smart Meter and AMI	10.00		-	-
2	SCADA upgradation, cabling connection, infra development, modernization	225.00		-	-
3	Training and Placement	20.00		-	-
	Total	**255.00**	**130.00**	**-**	**-**

Sr. No.	Name of scheme	FY 2022-23			
		Approved in MYT Order		Revised Estimates	
		Capex	Capitalisation	Capex	Capitalisation
Other Schemes					
1	Saligao 3/63 MVA 220X33 kV S/s at Saligao & Associated D/C Lines			-	-
2	Verna 220/110/33 kV			-	-
3	Upgradation of PONDA EHV S/s project			5.00	-
4	Tuem Project			20.00	-
5	Over Head to Underground Cuncholim Conocona			-	-
6	Xeldom S/s (220/33 63 MVA T/F)			-	-
	Total			**25.00**	**-**
Deposit Works					
	Deposit Works	**35.37**	**53.37**	**22.9**	**21.27**
Grand Total		**997.35**	**950.92**	**655.19**	**422.89**

Commission's analysis:

The Commission with regard to the capitalisation proposed to be undertaken during the year, directed the Petitioner to submit the details of the schemes to be undertaken during the year along with the supporting documents along with the status of Capital work in progress for the 9 months. Considering the progress of the projects and the total capital expenditure done till December 2022, the Commission has approved the capital expenditure and capitalisation in accordance with the submission of the Petitioner. Therefore, the Commission approves the capital expenditure and capitalisation for the year as shown in the following table:

Table 32: Capitalisation and Capital Expenditure approved by the Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Capital Expenditure	997.35	632.29	632.29
2	Capitalisation	950.92	401.62	401.62

The Commission approves capitalisation of INR 401.62 Crore in the APR of FY 2022-23. The same will be true-up as per actuals at the time of True-up.

4.12. Capital Structure

Petitioner's Submission

The Petitioner submitted that most capital assets are created out of the equity contribution from Government of Goa and the remaining assets have been created through grants and Electricity Fund. Further, the Petitioner submitted that the opening and closing balance of GFA for FY 2022-23 onwards has been arrived at after considering the provisional capitalization for the period FY 2021-22 and estimated capitalization for FY 2022-23. The computation of the same is provided in the table below:

Table 33: Opening & Closing GFA for FY 2022-23

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Opening GFA	1,274.13	1,398.63	1,443.85	1,566.39
Addition	127.18	50.86	165.19	401.62
Retirement	2.68	5.63	3.17	
Closing GFA	1,398.63	1,443.85	1,566.39	1,968.01

The Petitioner has also submitted the Opening and Closing GFA for FY 2022-23 after excluding the assets created from Electricity Duty and Grants as shown in table below:

Table 34: Opening & Closing GFA (excl. ED and Grant) for FY 2022-23

Particulars	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23
Opening GFA (Excl. Grand & ED)	1068.37	1107.15	1136.00	1,212.86
GFA Addition during the year	127.18	51.90	165.19	401.62
Less: 60% and 75% Grant Component of APDRP Part-B / IPDS Scheme	16.78	2.74	28.88	10.80
Less: Schemes out of ED Fund	68.94	14.68	59.45	114.74
Net GFA addition during the year	41.46	34.48	76.86	276.08
Less: Retirement	2.68	5.63		
Opening GFA (Excl. Grant & ED)	1107.15	1136.00	1,212.86	1,488.94

Commission's analysis

Regulation 27 of the JERC MYT Regulations, 2021 specifies the following:

"27.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2022 shall be considered:

Provided that in case of retirement or replacement or De-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of such assets:

Provided further that in case of retirement or replacement or De-capitalisation of the assets, the debt capital approved as mentioned above, shall be reduced to the extent of outstanding debt component based on documentary evidence, or the normative loan component, as the case may be, of the original cost of such assets.

27.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 24, after prudence check for determination of tariff:

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of tariff:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as a normative loan for the Licensee for determination of tariff:

Provided also that the Licensee shall submit documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme,

shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

27.3 Any expenditure incurred or projected to be incurred on or after April 1, 2022, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in these Regulations"

The Commission has considered the actual trued up closing values of GFA, loan and equity approved for FY 2019-20 and the provisional figures of capitalisation and funding breakup in capitalisation schedule submitted by the Petitioner for FY 2020-21 (provisional) and FY 2021-22 (estimated) to arrive at the opening values of GFA, loan and equity for FY 2022-23. The Capital Structure approved by the Commission for FY 2022-23 is shown in the following tables:

Table 35: Capital Structure considered by the Commission for FY 2022-23 (INR Cr.)

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	**Total Capitalisation**	**950.92**	**401.62**	**401.62**
2	Less Capitalisation through Grant & Consumer Contribution	719.38	125.54	125.54
	Electricity Duty Fund	571.31	114.74	114.74
	Grant & Consumer Contribution	148.07	10.80	10.80
3	**Net Capitalisation excluding Electricity Duty Fund & Govt. Grants**	**231.55**	**276.08**	**276.08**
4	Debt (%)	70%	70%	70%
5	Equity (%)	30%	30%	30%
6	**Normative Loan**	**162.08**	**193.26**	**193.26**
7	**Normative Equity**	**69.46**	**82.82**	**82.82**

Table 36: GFA (including GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution) considered by the Commission for FY 2022-23 (INR Cr.)

Sl. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	Opening Gross Fixed Assets	2,103.98	1,566.39	1606.92
2	Addition During the FY	950.92	401.62	401.62
3	Adjustment/Retirement During the FY	-		-
4	Closing Gross Fixed Assets	3,054.90	1,968.01	2008.54

Table 37: GFA (excluding GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution) considered by the Commission for FY 2022-23 (INR Cr.)

Sl. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	Opening Gross Fixed Assets	1,261.89	1178.42	1152.26
2	Addition During the FY	231.55	276.08	276.08
3	Adjustment/Retirement During the FY	-	-	-
4	Closing Gross Fixed Assets	1,493.43	1454.50	1428.34

4.13. Depreciation

Petitioner's Submission

For computation of Depreciation, the Petitioner has followed JERC MYT Regulations 2021, the depreciation rates as specified by the Commission has been adopted for calculation of depreciation on different asset categories. The average GFA excluding grant and electricity duty works out as Rs. 1,178.42 Cr is derived. Hence depreciation towards GFA excluding grant & electricity duty works out as Rs. 58.92 Cr. in proportion with GFA excluding grant & electricity duty to total average GFA. The table below shows the working of Depreciation considered in ARR for FY 2022-23.

Table 38: Depreciation claimed by the Petitioner in the APR of FY 2022-23 (INR Crore)

Particulars	Revised Projections FY 2022-23
Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc)	1178.42
Add: Gross Asset Addition	401.62
Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution	125.54
Value of Asset eligible for depreciation	276.08
Add: Addition During the Year	276.08
Less: Decapitalisation	-
Closing Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	1454.50
Average Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	1316.46
Depreciation	**58.92**
Wt. Avg Rate of Depreciation	**4.48%**

Commission's analysis

Regulation 31 of the JERC MYT Regulations, 2021 stipulates the following:

"31.1 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

Provided also that the no depreciation shall be allowed on the assets financed through consumer contribution, deposit work, capital subsidy or grant.

31.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

Provided further that the salvage value of Information Technology equipment and computer software shall be considered at zero (0) per cent of the allowable capital cost.

31.3 Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

31.4 In case of existing assets, the balance depreciable value as on April 1, 2022, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2021, from the gross depreciable value of the assets.

31.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the Year, depreciation shall be computed based on the average of opening and closing value of assets:

Provided that depreciation shall be re-calculated during truing-up for assets capitalised at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalised by the Applicant, subject to the prudence check of the Commission.

31.6 For Transmission Licensee, the depreciation shall be calculated at rates and norms specified in the prevalent CERC Tariff Regulations for transmission system.

31.7 The depreciation for a Distribution Licensee shall be calculated annually, based on the Straight Line Method, over the Useful Life of the asset at rates specified in Appendix I of these Regulations.

31.8 In addition to allowable depreciation, the Distribution Licensee shall be entitled to advance against depreciation (AAD), computed in the manner given hereunder:

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure,

subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

Provided that advance against depreciation shall be permitted only if the cumulative repayment upto a particular Year exceeds the cumulative depreciation upto that Year:

Provided further that advance against depreciation in a Year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation upto that Year.

31.9 The Distribution Licensee shall provide the list of assets added during each Year of Control Period and list of assets completing 90% of depreciation in the Year along with Petition for annual performance review, true-up and tariff determination for ensuing Year.

31.10 The remaining depreciable value for a Distribution Licensee shall be spread over the balance useful life of the asset, on repayment of the entire loan."

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in JERC MYT Regulations, 2021, provided in the following table:

Table 39: Asset-wise depreciation rate considered by the Commission (%)

Description of Assets	Rate of Depreciation
Land & Land Rights	0.00%
Buildings	1.80%
Plant & Machinery	3.60%
Transformer	3.60%
Lines & Cables (HT & LT)	3.60%
Vehicles	18.00%
Furniture & Fixtures	6.00%
Office Equipment	6.00%
IT Equipment	15.00%
Testing & Measuring Equipment	6.00%
SCADA P&M	6.00%

However, as the true-up of FY 2020-21 and FY 2021-22 is yet to be finalised, therefore the Commission has considered the weighted average rate of depreciation as approved by the Commission in the MYT Order. The opening GFA of the FY 2022-23 is considered as discussed in section 4.12 of this Order. As discussed in the preceding section, GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution have been excluded for the computation of Depreciation. Further, depreciation has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved during the year. The GFA of assets that have completed 90% depreciation but still included in the GFA have not been excluded for the computation of Depreciation due to unavailability of requisite data. Accordingly, the Commission shall consider the same during the True-up of the respective years.

The following table provides the calculation of depreciation for the FY 2022-23.

Table 40: Depreciation approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	Opening Gross Fixed Assets	1261.89	1178.42	1152.26
2	Addition during the year	231.55	276.08	276.08
3	Adjustment/Retirement during the year	0.00	0.00	0.00
4	Closing Gross Fixed Assets	1493.43	1454.50	1428.34
5	Average Gross Fixed Assets	1377.66	1316.46	1290.30
6	Weighted Average Depreciation rate (%)	3.82%	4.48%	3.82%
7	**Depreciation**	**52.64**	**58.92**	**49.30**

The Commission now approves depreciation of INR 49.30 Cr in the APR of the FY 2022-23 subjected to true-up based on Audited Accounts.

4.14. Interest and Finance Charges

Petitioner's Submission

The Petitioner submitted that most of the capital assets are created out of the equity contribution from Government of Goa and the actual borrowing of loan is only to the extent of the APDRP schemes. The Petitioner has computed loan balance and interest on loan as per normative principles and methodology adopted by the Hon'ble Commission in past orders.

The closing normative loan balance as approved in the true-up for FY 2016-17 has considered as opening balance for FY 2017-18, and normative loan addition is calculated at 70% of the GFA excluding grant and electricity duty fund contribution till 31st March 2022. The same balance is carried forward as opening normative loan for FY 2022-23. Further during FY 2022-23, addition of net GFA (excluding grant and electricity duty) is added. Normative loan repayments are considered same as depreciation amount excluding in proportion of grant and electricity duty for FY 2022-23. The rate of Interest for long term Interest rate has been considered at the rate of 8.00% including 100 basis points as per one-year SBI MCLR rate applicable as on 1st April of relevant financial year, i.e. 1stApril 2022. Further, the Petitioner has not considered the Letter of Credit charges for payment security charges as directed by the Hon'ble Commission, as the same will be considered at the time of true up. Accordingly, the Petitioner has claimed the Interest & Finance Charges ofINR 26.76Crore for FY 2022-23 against INR 22.26 Crore approved in the MYT Order.

Commission's analysis:

Regulation 29 of the JERC MYT Regulation, 2021 states the following:

"29.1 The loans arrived at in the manner indicated in Regulation 27 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of De-capitalisation or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the decapitalized or retired or replaced assets, based on documentary evidence.

29.2 The normative loan outstanding as on April 1, 2022, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2021, from the gross normative loan.

29.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 31.

29.4 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the Year applicable to the Transmission Licensee or the Distribution Licensee shall be considered as the rate of interest after prudence check:

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided further that if the Transmission Licensee or the Distribution Licensee does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

29.5 The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest:

Provided that at the time of truing up, the normative average loan of the Year shall be considered on the basis of the actual asset capitalisation approved by the Commission for the Year.

29.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.

29.7 The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by Transmission Licensee or Distribution Licensee.

29.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.

29.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission or Distribution Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

29.10 The Transmission Licensee or the Distribution Licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the equally between the beneficiaries; i.e., the Transmission Licensee and the Distribution Licensee or the Distribution Licensee and the Consumers of Distribution Licensee."

As the Petitioner only has normative loan and no actual loan i.e., no fixed assets in operation which are funded through loans, the Commission has considered the SBI 1 Year MCLR rate as on 1st April 2022 (7.00%), plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2021.

The Interest on Loan has been calculated on the average loan during the year with the opening loan for FY 2022-23 considered as discussed in section 4.12 of this Order. Further, the normative loan addition during each year of the control period has been considered as per the capital structure approved in section 4.12 of this Order.

Repayment of the loan has been considered equivalent to the depreciation for the respective years as determined by the Commission in line with the JERC MYT Regulations, 2021.

The following table provides the Interest on Loan approved by the Commissionin the MYT Order, now claimed by the Petitioner and approved by the Commission in the APR of FY 2022-23:

Table 41: Interest on Loan considered by the Commission for FY 2022-23 (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Normative Loan	223.50	267.37	137.15
Add: Normative Loan During the year	162.08	193.26	193.26
Less: Normative Repayment= Depreciation	52.64	58.92	49.30
Closing Normative Loan	332.94	401.71	281.11
Average Normative Loan	278.22	334.54	209.13
Rate of Interest (%)	8.00%	8.00%	8.00%
Interest on Loan	**22.26**	**26.76**	**16.73**

The Commission approves Interest and Finance Charges of INR 16.73 Crore in the APR of the FY 2022-23.

4.15. Return on Equity (RoE)

Petitioner's Submission

Return on Equity (RoE) is computed in accordance with the JERC MYT Regulations 2021, RoE is computed on 30% of the capital base. The opening balance of assets and accumulated depreciation are considered as per audited account of FY 2019-20 and further provisional actual numbers used to arrive at the opening balance for FY 2022-23. Further normative equity addition during the year is considered 30% of the net GFA addition excluding proportion of grant and electricity duty. Accordingly, RoE is computed at 16% post-tax.

Commission's analysis:

Regulation 28 of the JERC MYT Regulation, 2021 states the following:

"28.1 Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 27 for the assets put to use for the Transmission Licensee and shall be allowed in accordance with the prevalent CERC Tariff Regulations for transmission system.

28.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

28.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of sixteen (16) per cent per annum.

28.4 The return on equity shall be computed on average of equity capital at the beginning and end of Year."

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021 i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business.

The Commission has considered a post-tax rate of 15.50% for the Distribution Wires Business and a post-tax rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the capital structure as discussed in section 4.12 of this Order. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent Regulations during the True-up of the respective years. The following table provides the total return on equity approved for FY 2022-23.

Table 42: Return on Equity considered by the Commission for 3rd Control Period (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Equity Amount	379.16	346.08	338.86
Equity Addition during year	69.46	82.82	82.82
Closing Equity Amount	448.62	428.90	421.69
Average Equity Amount	413.89	387.49	380.27
Average Equity (Wires Business)	372.50	348.74	342.25
Average Equity (Retail Supply Business)	41.39	38.75	38.03
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	57.74	54.05	53.05
Return on Equity for Retail Supply Business	6.62	6.20	6.08
Total Return on Equity	**64.36**	**60.25**	**59.13**

The Commission approves the Return on Equity of INR 59.13 Crore in the APR of the FY 2022-23.

4.16. Interest on Security Deposits

Petitioner's Submission

The Petitioner submitted that the provision of interest on security deposits is to be made at the bank rate. The interest rate considered is 4.25% which is RBI Bank rate as on 1st April 2022.In view of the above, Interest on Security Deposit is calculated at Rs. 3.96 Cr. (FY 2022-23 H1) and Rs. 4.23 Crore (FY 2022-23) on cash security deposit amounts excluding Bank Guarantee & Fixed Deposit Receipts based on the JERC MYT Regulations.

The table below shows details of Interest on Security Deposit projected for FY 2022-23:

Particulars	Approved in MYT Order	Petitioner's Submission
Opening Security Deposit	77.02	86.60
Net Additions during the year	15.65	26.68
Less: Deposits Refunded	0.37	0.71
Closing Security Deposit	**92.31**	**112.58**
Average Security Deposit	84.67	99.59
Rate of Interest (%)	4.25%	4.25%
Interest on Security Deposit	**3.60**	**4.23**
Cumulative Interest on Security Deposit including Past Years		**31.29**
Interest on Security Deposit Paid		**5.36**
Balance Interest on Security Deposit to be Paid		**0.00**

Commission's analysis:

Regulation 29 of the JERC MYT Regulation, 2021 states the following:

"29.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

Provided that at the time of truing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission."

The Interest on security deposits has been calculated in accordance with the JERC MYT Regulations 2021, based on the average of the opening and closing consumer security deposits during the year. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. Net additions during the year have been considered based on the Petitioner's Submission.

The following table provides the calculation of interest on consumer security deposits approved by Commission in MYT Order, Petitioner's Submission and now approved by the Commission in the APR:

Table 43: Interest on Consumer security considered by the Commission for FY 2022-23 (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Security Deposit	77.02	86.60	86.60
Add: Deposits During the year	15.65	26.68	26.68
Less: Deposits refunded	0.37	0.71	0.71
Closing Security Deposit	92.31	112.58	112.57
Average Security Deposit	84.67	99.59	99.59
RBI Bank Rate (%)	4.25%	4.25%	4.25%
Interest on Security Deposit on normative basis	**3.60**	**4.23**	**4.23**

The Commission approves Interest on Security Deposit as INR 4.23 Cr in the APR of the FY 2022-23.

4.17. Interest on Working Capital

Petitioner's Submission

Interest on Working Capital has been calculated based on the normative principles outlined in the JERC MYT Regulations, 2021.The Petitioner has computed the Interest on Working Capital of INR14.92 Crore at rate of 9% (SBI 1 year MCLR applicable as on 1st April 2022 i.e. 7.00% + 200 basis points).

Commission's analysis:

Regulation 64 of the JERC MYT Regulation, 2021 states the following:

"64.1The Distribution Licensee shall be allowed interest on the estimated level of working capital forthe Retail Supply Business for the Financial Year, computed as follows:

a) O&M Expenses for one (1) month; plus

b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus

c) Receivables equivalent to two (2) months of the expected revenue from Consumers at theprevailing tariff;

Less

d) Power Purchase cost for one (1) month; plus

e) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 ofthe Act from Consumers except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be recalculated on the basis of the values of components of working capital approved by the Commission in the truing up."

The Commission has computed the Interest on Working Capital for each year of the Control Period in accordance with the JERC MYT Regulations, 2021. The interest rate has been considered as 9.00% (1 year MCLR as on 1st April 2022 i.e., 7.00% + 200 basis points). The following table provides the Interest on working Capital approved by Commission in MYT Order, Petitioner's Submission and now approved by the Commission in the APR.

Table 44: Interest on working capital considered by the Commission for FY 2022-23 (INR Cr.)

Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
O&M Expense for 1 month	36.16	41.43	40.62
Maintenance spares at 40% of R&M expenses for one (1) month;	1.84	1.82	1.30
Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff	401.36	407.97	419.65
Less: Power Purchase cost for one (1) month	153.29	185.85	188.34
Less: Amount held as security deposits	84.67	99.59	99.59
Net Working Capital	**201.41**	**165.78**	**173.65**
Rate of Interest (%)	9.00%	9.00%	9.00%
Interest on Working Capital	**18.13**	**14.92**	**15.63**

The Commission approves the Interest on Working Capital as INR 15.63Crore in the APR of the FY 2022-23.

4.18. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not earmarked any provision for bad and doubtful debts for the year.

Commission's analysis

The Commission also has not considered any provision towards Bad & Doubtful Debts. The same shall be accounted for as per actuals in the True-up of FY 2022-23.

4.19. Income Tax

Petitioner's Submission

The Petitioner has not estimated any Income Tax for the year.

Commission's analysis

The Commission also has not considered any estimate towards Income Tax. The same shall be accounted for as per actuals in the True-up of FY 2022-23.

4.20. Non-Tariff Income

Petitioner's Submission

The Petitioner submitted that the Non-Tariff Income comprises of proceeds from sale of dead stock, wastepaper, receipt from State Electrical Inspectorate and other miscellaneous receiptsamong others. The Non-Tariff Income for FY 2022-23 was estimated as INR 29.36 Crore.

Commission's analysis:

The Commission has considered the Non-Tariff Income of INR 29.36 Crore in the APR of theFY 2022-23, as per the Petitioner submission. The NTI now approved is shown in the table below:

Table 45: Non-Tariff Income approved by Commission (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
	Total	**26.32**	**29.36**	**29.36**

The Commission approves Non-Tariff Income of INR 29.36 Cr in the APR of the FY 2022-23. The same shall be considered at actuals at the time of True-up.

4.21. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the Petitioner has submitted the net aggregate revenue requirement of INR 2864.13 Cr after adjusting the Non -Tariff Income for FY 2022-23.

Commission's analysis

On the basis of the detailed analysis of the cost parameters of the ARR, the Commission has considered and approved the revenue requirement in the APR of the FY 2022-23 as provided in the table below:

Table 46: Aggregate Revenue Requirement approved by the Commission for FY 2022-23 (In INR Cr)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	1,839.53	2,230.19	2,260.14
2	O&M Expenses	433.95	497.07	487.47
3	Depreciation	52.64	58.92	49.30
4	Interest and Finance charges	22.26	26.76	16.73
5	Interest on Working Capital	18.13	14.92	15.63
6	Return on Equity	64.36	60.25	59.13
7	Interest on Security Deposit	3.60	5.36	4.23
8	**Total Revenue Requirement**	**2,434.47**	**2,893.48**	**2,892.64**
9	Less: Non-Tariff Income	26.32	29.36	29.36
10	**Net Revenue Requirement**	**2,408.15**	**2,864.12**	**2,863.28**

The Commission now approves the net ARR of INR 2,863.28 Cr in the APR of FY 2022-23.

4.22. Revenue at existing Retail Tariff

Petitioner's Submission

The Revenue from sale of power at existing Tariff based on the projected sales, consumer and connected load for FY 2022-23 is tabulated below:

Table 47: Revenue at existing tariff submitted by the Petitioner for FY 2022-23 (INR Cr.)

Sl. No.	Category	Revenue for FY 2022-23 from approved retail tariff				
		Full year revenue (Rs. Crore)				Average Billing Rate (Rs/kWh)
		Sales in MU	Revenue from Fixed Charges	Revenue from Energy Charges	Total	
1	**Domestic**	**1386.33**	**36.93**	**361.03**	**397.96**	**2.87**
(i)	LT-D Domestic	**1384.58**	**36.89**	**360.84**	**397.74**	**2.87**
	0-100 units	544.79	11.8	87.17	98.96	1.82
	101-200 units	331.54	9.07	77.91	86.98	2.62
	201-300 units	175.22	6.17	51.69	57.86	3.3
	301-400 units	96.5	3.48	37.64	41.12	4.26
	Above 400 units	236.53	6.38	106.44	112.82	4.77
(ii)	Low Income Group	1.37	0	-	0	0.02
(iii)	HT-D Domestic	0.38	0.03	0.18	0.22	5.75
2	**Commercial**	**607.53**	**44.89**	**301.75**	**346.64**	**5.71**
(i)	LT-C Commercial	**472.52**	**21.79**	**228.11**	**249.9**	5.29
	0-100 units	77.99	4.59	27.69	32.28	4.14
	101-200 units	47.8	1.69	20.79	22.49	4.7
	201-400 units	60.12	3.14	29.16	32.3	5.37
	Above 400 units	286.61	12.36	150.47	162.83	5.68
(ii)	**HT-C Commercial**	**135.02**	**23.1**	**73.64**	**96.74**	**7.17**
3	**Industrial**	**2139.85**	**189.41**	**1035.98**	**1225.39**	5.73
(i)	LT-I Industrial	**80.91**	**7.05**	**31.07**	**38.12**	4.71
	0-500 units	16.18	3.4	5.5	8.9	5.5
	Above 500 units	64.73	3.66	25.57	29.22	4.51
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	4.48	0.14	2.35	2.49	2.49
(iii)	High Tension-I/HT-I	1499.12	157.91	734.68	892.58	892.58

Sl. No.	Category	Revenue for FY 2022-23 from approved retail tariff				
		Full year revenue (Rs. Crore)				Average Billing Rate (Rs/kWh)
		Sales in MU	Revenue from Fixed Charges	Revenue from Energy Charges	Total	
	Connected at 11/33 kV	1247.94	135.2	616.15	751.36	751.36
	Connected at 110 kV	251.18	22.7	118.52	141.22	141.22
(iv)	High Tension-Ferro/SM/PI/SR	555.35	24.31	267.89	292.2	292.2
4	**Agriculture**	**33.62**	**1.71**	**5.88**	**7.59**	**7.59**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	17.29	1.09	2.59	3.69	3.69
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.79	0.05	0.14	0.19	0.19
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	4.89	0.44	1.03	1.47	1.47
(iv)	High Tension-AG/HT-AG (Allied Activities)	10.65	0.12	2.12	2.24	2.24
5	**Military Engineering Services/ defense Establishments**	**26.96**	**1.73**	**13.7**	**15.43**	**15.43**
6	**Public Lighting**	**29.61**	**0.23**	**16.73**	**16.96**	**16.96**
7	**Hoardings/Signboards**	**0.16**	**0.04**	**0.16**	**0.2**	**0.2**
8	**Temporary**	**12.1**	**0**	**10.18**	**10.18**	**10.18**
(i)	**LT**	**9.77**	**0**	**8.07**	**8.07**	**8.07**
	LT Domestic	0.69	0	0.3	0.3	0.3
	LT Commercial	9.08	0	7.77	7.77	7.77
(ii)	**HT**	**2.33**	**0**	**2.11**	**2.11**	**2.11**
9	**Single Point Supply**	**5.69**	**0.91**	**2.76**	**3.67**	**3.67**
(i)	*Residential Complexes*	0	0	0	0	0
(ii)	*Commercial Complexes*	5.69	0.91	2.76	3.67	3.67
(iii)	*Industrial Complexes*	0	0	0	0	0
	TOTAL	**4241.87**	**275.84**	**1748.18**	**2024.02**	**4.77**

Commission's analysis

The category wise/sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/sub-category and slab. The Commission has considered suitable assumptions wherever necessary. The revenue at existing tariff as computed by the Commission for the FY 2022-23 has been shown in the following table:

Table 48: Revenue at existing tariff approved by the Commission for FY 2022-23 (INR Cr.)

Sl. No.	Category	Sales (MU)	Revenue from fixed Charges (Rs Cr.)	Revenue from energy charges (Rs Cr.)	Total (Rs. Cr.)
1	**DOMESTIC**	**1384.16**	**43.87**	**360.97**	**404.84**
(i)	LT-D Domestic	1382.87	43.82	360.79	404.61
	0-100 units	531.64	13.37	85.06	98.44
	101-200 units	337.37	9.65	79.28	88.93
	201-300 units	184.79	7.57	54.51	62.08
	301-400 units	102.40	4.53	39.94	44.47
	Above 400 units	226.66	8.70	102.00	110.69
(ii)	Low Income Group	0.93	0.00	-	0.00
(iii)	HT-D Domestic	0.37	0.04	0.18	0.22
2	**COMMERCIAL**	**625.14**	**47.77**	**309.45**	**357.22**
(i)	LT-C Commercial	472.04	23.03	226.16	249.20
	0-100 units	85.36	6.42	30.30	36.72
	101-200 units	51.16	2.03	22.25	24.29
	201-400 units	63.50	2.60	30.80	33.40
	Above 400 units	272.02	11.98	142.81	154.79
(ii)	HT-C Commercial	153.10	24.74	83.29	108.02
3	**INDUSTRIAL**	**2239.64**	**184.24**	**1089.92**	**1274.17**
(i)	LT-I Industrial	86.77	5.59	33.35	38.94
	0-500 units	16.91	2.58	5.75	8.33
	Above 500 units	69.86	3.01	27.59	30.60
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	3.90	0.12	2.05	2.17
(iii)	High Tension-I/HT-I	1662.58	149.25	819.90	969.15
	Connected at 11/33 kV	1388.44	127.69	690.44	818.14
	Connected at 110 kV	274.14	21.56	129.46	151.01
(iv)	High Tension-Ferro/SM/PI/SR	486.38	29.29	234.63	263.92
4	**AGRICULTURE**	**32.41**	**1.31**	**5.99**	**7.30**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	14.22	0.79	2.13	2.92
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.65	0.04	0.11	0.15
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	5.52	0.38	1.38	1.76
(iv)	High Tension-AG/HT-AG (Allied Activities)	12.03	0.10	2.36	2.47
5	**Military Engineering Services/defense Establishments**	**32.02**	**1.59**	**16.01**	**17.60**
6	**PUBLIC LIGHTING**	**46.27**	**0.90**	**26.14**	**27.04**

Sl. No.	Category	Sales (MU)	Revenue from fixed Charges (Rs Cr.)	Revenue from energy charges (Rs Cr.)	Total (Rs. Cr.)
7	**HOARDINGS/SIGNBOARDS**	**0.27**	**0.04**	**0.27**	**0.30**
8	**TEMPORARY**	**8.80**	**0.00**	**7.67**	**7.67**
(i)	**LT**	3.60	0.00	2.98	2.98
	LT Domestic	0.25	0.00	0.11	0.11
	LT Commercial	3.35	0.00	2.87	2.87
(ii)	HT	5.20	0.00	4.69	4.69
9	**Single Point Supply**	**5.38**	**0.56**	**2.67**	**3.23**
(i)	Residential Complexes	0.00	0.00	0.00	0.00
(ii)	Commercial Complexes	5.38	0.56	2.67	3.23
(iii)	Industrial Complexes	0.00	0.00	0.00	0.00
	TOTAL	**4374.09**	**280.29**	**1819.09**	**2099.38**

The Commission has determined revenue from sale of power at existing tariff as INR2009.38Crore in the APR of FY 2022-23.

4.23. Standalone Revenue Gap/ Surplus for FY 2022-23

Petitioner's Submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue gap of INR 298.33 Cr for the FY 2022-23.

Commission's analysis

Based on the approved ARR and existing retail tariff, the following Revenue Gap/Surplus is arrived at for the FY 2022-23:

Table 49: Standalone Revenue Gap/ (Surplus) at existing tariff approved by Commission for FY 2022-23 (In INR Cr)

S. No.	Particulars	Approved in MYT Order	Petitioners' Submission	Now Approved
1	Net Revenue Requirement	2408.15	2,864.13	2,863.28
2	Revenue from Retail Sales at Existing Tariff including FPPCA	1992.53	2,565.79	2,517.89
	Net Gap /(Surplus)	**415.62**	**298.33**	**345.38**

The Commission has approved the standalone gap at existing retail tariff of INR 345.38 Crore in the APR of FY 2022-23, which will be met through the budgetary support from the Government of Goa as confirmed by the Petitioner vide Letter Reference No. vide its letter No. 1/14/2021-FIN (BUD)/300 dated 29th December 2021.

5. Chapter 5: Determination of Aggregate Revenue Requirement for the FY 2023-24

5.1. Background

The ARR for FY 2023-24 was approved in the MYT Order dated 31st March 2022 (herein referred as "MYT Order") issued for the 3rd Control Period (FY 2022-23 to FY 2024-25). In this Chapter the Commission determines the Aggregate Revenue Requirement (ARR) for the FY 2023-24 based on the information made available for the previous years and the various norms defined in the MYT Order. The determination of Aggregate Revenue Requirement has been done in accordance with the JERC MYT Regulations, 2021.

5.2. Approach for determination of ARR for the FY 2023-24

The Petitioner has determined the ARR for the FY 2023-24 in accordance with the JERC MYT Regulations, 2021. The Petitioner has computed revenue from the sale of power on the basis of the Retail Tariff approved by the Commission in the Tariff Order for FY 2022-23. The Commission has computed the individual elements constituting the Aggregate Revenue Requirement for FY 2023-24 based on figures approved in the MYT Order dated 31st March 2022. Subsequently, the revenue at existing tariff is determined to arrive at the revenue gap/surplus for the FY 2023-24.

The Commission believes that the projections of sales and Power Purchase Cost approved in the MYT Order were based on historical trends and figures. Since the latest cost trends for fixed and variable components of the power purchase costs are now available, it is prudent to revise the Power Purchase Cost. Further, energy sales have been revised as significant growth is observed in recent years as the nation is recovering from the Covid-19 pandemic. Accordingly, the Commission has determined the revised Power Purchase Cost based on the revised energy sales and the same Intra-State T&D loss as approved in the MYT Order for FY 2023-24. Resultantly, the Commission has also determined the Renewable Purchase Obligation (RPO) and the Interest on Working Capital which are dependent on the Power Purchase Cost. Further, the O&M expenses as per the latest inflation numbers have been computed and approved. The Commission has determined the revenue from sale of power based on the approved energy sales, number of consumers and connected load in the FY 2023-24 to calculate the revenue gap for the year.

5.3. Projection of Number of consumers, Connected Load and Energy Sales

Petitioner's Submission

The Petitioner submitted the Commission had approved the estimated sales for FY 2023-24 as 4,385.84 MUs. Post COVID, the economic activity in the State of Goa has increased and the sales have increased in FY 2021-22 and first half of FY 2022-23. The actual sales for FY 2021-22 was 4009.03 MU and the actual sales during first half of FY 2022-23 was 2215.01 MU. Similarly, there has been a growth in number of consumers and connected load for FY 2022-23.

The Petitioner has considered the actual sales during FY 2021-22 and first half of FY 2022-23 for projecting the category wise sales for FY 2023-24.

The Petitioner has estimated the energy sales, connected load and number of consumers for the year after extrapolating the figures of sales, connected load and number of consumers determined for APR FY 2022-23 with 3, 4 & 5 year CAGR and in case of (-) negative CAGR assumption of 3% is considered.

The following table provides the no. of consumers, connected load and energy sales projected by the Petitioner:

Table 50: Projected No. of consumers, Connected Load and Energy Sales

Sr. No.	Particulars	Sales (MUs)	Connected Load (kW)	Number of Consumers
1(a)	Tariff LTD/Domestic	1385.41	1881661	581956
1(b)	Tariff LTIG/Low Income Group	0.93	71	903
2	Tariff LTC/Commercial	511.86	426256	111549
3	Tariff LTI/Industry	4.16	2567	123
4	Tariff LTP/Mixed (Hotel Industries)	93.79	146023	6027
5A	Tariff LTAG/Agriculture (Pump sets / Irrigation)	19.05	47441	13125
B	Tariff LTAG/Agriculture (Allied Activities)	1.48	2406	304
6	Tariff LTPL/ Public Lighting	50.09	10061	6473
7	Tariff LTH/ Hoarding and Signboards	0.34	572	69
8	Tariff-LTTS/ Temporary Supply	4.09	7526	5003
9	Tariff-HTI/ Industrial	0.39	400	4
10	Tariff HTFS Industrial (Ferro Metallurgical/ Steel Melting/ Power Intensive/ Steel Rolling)	170.89	131089	343
11	Tariff HTC/ Commercial	1738.62	606555	833
12 A	Tariff HTAG/ Agriculture (Pump Sets/ irrigation)	512.94	116495	24
B	Tariff HTAG/ Agriculture (allied activity)	6.51	10006	44
13	Tariff HTD/ Domestic	14.90	2377	3
14	Tariff HTMES/ Defense Establishment	33.43	9223	15
15	Tariff HTTS/ Temporary Supply	6.33	7083	16
16	Single Point Supply	6.68	2500	1
17	Electric Vehicle Charging Station			2
	Total	**4561.91**	**3410314**	**726815**

Commission's analysis

The Commission for projecting the number of consumers, connected load and energy sales for each category has observed the historical trends in the past 6 years (FY 2016-17 to FY 2021-22) and the actual data provided by the Petitioner for the initial 9 months of FY 2022-23. The Commission has calculated the Compound Annual Growth Rate (CAGR) and the year on year (y-o-y) increase for each category using appropriate growth rate and has estimated the category wise consumers, connected load and energy sales. The tables below provides the trends observed in the growth of number of consumers, connected load and energy sales for the Petitioner.

Table 51: Growth in Sales

		Y-o-Y growth rate					CAGR				
	Category	FY18/ FY17	FY19/ FY18	FY20/ FY19	FY21/ FY 20	FY22/ FY21	5 year	4 year	3 year	2 year	1 year
1	LTD/Domestic	7.74%	-4.19%	5.83%	17.36%	-3.68%	4.31%	3.47%	6.16%	6.32%	-3.68%
2	LT-LIG/Low Income Group	-32.92%	-23.96%	-10.27%	8.54%	-18.42%	-16.53%	-11.84%	-7.38%	-5.90%	-18.42%
3	LTC/Commercial	9.13%	-5.64%	5.49%	-12.97%	8.04%	0.42%	-1.64%	-0.27%	-3.03%	8.04%
4	LTI/Industrial	-5.18%	-12.52%	-14.18%	3.14%	3.96%	-5.26%	-5.28%	-2.74%	3.55%	3.96%
5	LT Mixed/ LT-P Hotel Industries	-42.12%	39.18%	23.46%	-31.24%	11.93%	-5.21%	7.24%	-1.69%	-12.27%	11.93%

		Y-o-Y growth rate					CAGR				
	Category	FY18/ FY17	FY19/ FY18	FY20/ FY19	FY21/ FY 20	FY22/ FY21	5 year	4 year	3 year	2 year	1 year
6	LTAG/Agriculture	-33.03%	-10.14%	2.82%	17.37%	-20.09%	-10.31%	-3.52%	-1.20%	-3.16%	-20.09%
7	LT Temporary	-51.27%	21.98%	-4.84%	-12.08%	10.91%	-11.22%	3.15%	-2.46%	-1.25%	10.91%
8	HTD Domestic		-12.50%	39.29%	47.30%	-37.33%		2.99%	8.74%	-3.92%	-37.33%
9	HTC Commercial	-34.46%	1.74%	6.56%	-10.80%	14.89%	-6.15%	2.66%	2.98%	1.23%	14.89%
10	HTI Industrial	42.58%	2.38%	-1.46%	-6.20%	19.02%	9.94%	3.02%	3.23%	5.66%	19.02%
11	High Tension-Ferro/SM/PI/SR	50.09%	15.33%	-8.13%	-3.77%	1.68%	9.25%	0.91%	-3.49%	-1.08%	1.68%
12	HTAG/Agriculture	6.20%	5.03%	14.98%	17.55%	19.83%	12.56%	14.21%	17.44%	18.69%	19.83%
13	Military Engineering Services/Defense Establishments	14.61%	-11.40%	1.29%	4.52%	8.71%	3.17%	0.49%	4.80%	6.59%	8.71%
14	Public Lighting	-83.71%	617.65%	-4.01%	37.28%	-15.96%	5.29%	67.90%	3.46%	7.41%	-15.96%
15	Hoardings/ /Signboards	-20.60%	-38.96%	6.85%	-6.67%	28.57%	-9.08%	-5.94%	8.64%	9.54%	28.57%
16	HT Temporary	-67.76%	243.33%	123.30%	22.61%	61.70%	37.42%	97.45%	64.20%	40.81%	61.70%
17	Single Point Supply		-0.51%	-8.03%	-36.62%	19.65%		-8.73%	-11.32%	-12.92%	19.65%
	Total	18.34%	1.36%	0.49%	1.19%	6.66%	5.40%	2.40%	2.74%	3.89%	6.66%

Table 52: Growth in Connected Load

		Y-o-Y growth rate					CAGR				
	Category	FY18/ FY17	FY19/ FY18	FY20/ FY19	FY21/ FY 20	FY22/ FY21	5 year	4 year	3 year	2 year	1 year
1	LTD/Domestic	19.86%	4.98%	6.09%	7.20%	4.50%	8.38%	5.68%	5.92%	5.84%	4.50%
2	LT-LIG/Low Income Group	118.87%	-40.52%	-15.22%	-22.43%	-2.16%	-3.48%	-21.34%	-13.67%	-12.88%	-2.16%
3	LTC/Commercial	4.21%	7.17%	6.97%	6.85%	3.68%	5.77%	6.16%	5.82%	5.26%	3.68%
4	LTI/Industrial	28.62%	-1.75%	1.58%	-17.66%	-0.18%	1.08%	-4.83%	-5.84%	-9.34%	-0.18%
5	LT Mixed/ LT-P Hotel Industries	38.20%	-12.06%	9.32%	-19.02%	0.27%	1.53%	-6.01%	-3.89%	-9.89%	0.27%
6	LTAG/Agriculture	6.21%	-3.58%	7.74%	-23.69%	2.29%	-2.94%	-5.10%	-5.61%	-11.65%	2.29%
7	LT Temporary	35.37%	61.17%	-72.77%	91.72%	13.49%	5.27%	-1.14%	-16.01%	47.51%	13.49%
8	HTD Domestic		0.00%	0.00%	33.33%	- 10.00%		4.66%	6.27%	9.54%	-10.00%
9	HTC Commercial	8.60%	8.24%	8.82%	5.88%	-1.49%	5.94%	5.28%	4.31%	2.13%	-1.49%
10	HTI Industrial	2.51%	8.03%	4.75%	3.54%	-9.96%	1.58%	1.35%	-0.79%	-3.44%	-9.96%
11	High Tension-Ferro/SM/PI/SR	-9.49%	5.93%	-8.81%	13.07%	-10.00%	-2.31%	-0.43%	-2.46%	0.88%	-10.00%
12	HTAG/Agriculture	7.51%	16.81%	3.77%	1.55%	-10.00%	3.56%	2.59%	-1.75%	-4.40%	-10.00%
13	Military Engineering Services/Defense Establishments	0.00%	-1.87%	12.45%	9.38%	-10.00%	1.67%	2.09%	3.45%	-0.78%	-10.00%
14	Public Lighting	-86.49%	11.06%	80.75%	275.69%	2.13%	0.80%	66.59%	90.70%	95.88%	2.13%
15	Hoardings/ Signboards	3.34%	-6.95%	-1.56%	-9.54%	-9.16%	-4.90%	-6.86%	-6.83%	-9.35%	-9.16%
16	HT Temporary	0.00%	285.14%	-100.00%		24.62%	60.70%	80.94%	40.66%		24.62%
17	Single Point Supply	0.00%	0.00%	0.00%	-38.04%	-10.00%	-11.03%	-13.59%	-17.69%	-25.33%	-10.00%
	Total	12.22%	5.89%	4.27%	5.45%	0.76%	5.65%	4.07%	3.47%	3.08%	0.76%

Table 53: Growth in Number of Consumers

		Y-o-Y growth rate					CAGR				
	Category	FY18/ FY17	FY19/ FY18	FY20/ FY19	FY21/ FY 20	FY22/ FY21	5 year	4 year	3 year	2 year	1 year
1	LTD/Domestic	7.63%	0.95%	3.73%	2.19%	2.21%	3.31%	2.26%	2.71%	2.20%	2.21%
2	LT-LIG/Low Income Group	64.00%	-17.51%	-13.67%	-27.93%	-2.85%	-3.94%	-15.97%	-15.45%	-16.32%	-2.85%
3	LTC/Commercial	6.11%	1.91%	3.44%	2.42%	2.30%	3.23%	2.52%	2.72%	2.36%	2.30%
4	LTI/Industrial	-0.82%	-3.91%	1.24%	-1.72%	-0.32%	-1.12%	-1.20%	-0.27%	-1.02%	-0.32%
5	LT Mixed/ LT-P Hotel Industries	26.84%	-8.70%	-0.79%	-8.00%	0.87%	1.29%	-4.25%	-2.72%	-3.67%	0.87%
6	LTAG/Agriculture	1.13%	-1.36%	5.98%	3.23%	2.60%	2.29%	2.58%	3.93%	2.92%	2.60%
7	LT Temporary	4.89%	22.93%	-52.09%	78.08%	7.71%	3.45%	3.09%	-2.78%	38.49%	7.71%
8	HTD Domestic		0.00%	0.00%	33.33%	0.00%		7.46%	10.06%	15.47%	0.00%
9	HTC Commercial	9.42%	7.66%	12.00%	7.54%	7.01%	8.71%	8.53%	8.83%	7.28%	7.01%
10	HTI Industrial	5.33%	4.62%	3.31%	3.07%	1.43%	3.54%	3.10%	2.60%	2.25%	1.43%
11	High Tension-Ferro/SM/PI/SR	-9.38%	-6.90%	-3.70%	-11.54%	0.00%	-6.39%	-5.63%	-5.20%	-5.95%	0.00%
12	HTAG/Agriculture	4.88%	0.00%	2.33%	2.27%	0.00%	1.88%	1.14%	1.53%	1.13%	0.00%
13	Military Engineering Services/Defense Establishments	0.00%	0.00%	8.33%	7.69%	0.00%	3.13%	3.93%	5.27%	3.77%	0.00%
14	Public Lighting	-92.93%	18.14%	331.89%	444.48%	2.14%	14.94%	130.80%	188.53%	135.83%	2.14%
15	Hoardings/ Signboards	1.61%	-22.22%	-4.08%	-10.64%	54.76%	0.95%	0.78%	9.88%	17.60%	54.76%
16	HT Temporary	0.00%	300.00%	-100.00%		36.36%	71.88%	96.80%	55.36%		36.36%
17	Single Point Supply	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
	Total	6.74%	1.11%	3.31%	3.21%	2.24%	3.31%	2.46%	2.92%	2.72%	2.24%

Using the appropriate growth rate from the trends observed above, the number of consumers, connected load and energy sales have been estimated for FY 2023-24. For all categories, the growth rate is applied over the figures obtained in FY 2022-23, as estimated in the previous Chapter.

The growth rate adopted and the revised number of consumers, connected load and energy for each category have been tabulated as follows:

Table 54: No. of consumers approved by Commission

S. No.	Category	FY 2022-23 (RE)	Growth Rate		FY 2023-24
1	LTD/Domestic	563,354	5 year	3.31%	582,001
2	LT-LIG/Low Income Group	920		0.00%	920
3	LTC/Commercial	107,540	3 year	2.72%	110,465
4	LTI/Industrial	5,681		0.00%	5,681
5	LT Mixed/ LT-P Hotel Industries	116		0.00%	116
6	LTAG/Agriculture	12,948	5 year	2.29%	13,244
7	LT Temporary	5,004		0.00%	5,004
8	HTD Domestic	4		0.00%	4
9	HTC Commercial	311	2 year	7.28%	334
10	HTI Industrial	810	5 year	3.54%	838
11	High Tension-Ferro/SM/PI/SR	23		0.00%	23

12	HTAG/Agriculture	46	5 year	1.88%	47
13	Military Engineering Services/Defense Establishments	14		0.00%	14
14	Public Lighting	6,101		0.00%	6,101
15	Hoardings/Signboards	65		0.00%	65
16	HT Temporary	15		0.00%	15
17	Single Point Supply	1		0.00%	1
	Total	**702,952**			**724,872**

Table 55: Connected Load (kW) approved by Commission

S. No.	Category	FY 2022-23 (RE)	Growth Rate		FY 2023-24
1	LTD/Domestic	1,825,770	3 year	5.92%	1,933,855
2	LT-LIG/Low Income Group	89		0.00%	89
3	LTC/Commercial	415,022	5 year	5.77%	438,969
4	LTI/Industrial	116,459		1.08%	117,717
5	LT Mixed/ LT-P Hotel Industries	2,447		9.32%	2,675
6	LTAG/Agriculture	37,906		2.29%	38,774
7	LT Temporary	19,815		0.00%	19,815
8	HTD Domestic	377	4 year	4.66%	394
9	HTC Commercial	91,612	4 year	5.28%	96,449
10	HTI Industrial	521,359		4.75%	546,123
11	High Tension-Ferro/SM/PI/SR	102,773		5.93%	108,868
12	HTAG/Agriculture	10,703		3.77%	11,106
13	Military Engineering Services/Defense Establishments	7,816	3 year	3.45%	8,086
14	Public Lighting	12,586		2.13%	12,854
15	Hoardings/Signboards	513		0.00%	513
16	HT Temporary	3,751		0.00%	3,751
17	Single Point Supply	2,500		0.00%	2,500
	Total	**3,171,499**			**3,342,540**

Table 56: Energy Sales (MUs) approved by Commission

S. No.	Category	FY 2022-23 (RE)	Growth Rate		FY 2023-24
1	LTD/Domestic	1,382.87	3 year	6.16%	1,468.06
2	LT-LIG/Low Income Group	0.93		0.00%	0.93
3	LTC/Commercial	472.04	5 year	0.42%	474.02
4	LTI/Industrial	86.77		0.00%	86.77
5	LT Mixed/ LT-P Hotel Industries	3.90		0.00%	3.90
6	LTAG/Agriculture	14.86		0.00%	14.86
7	LT Temporary	3.60		0.00%	3.60
8	HTD Domestic	0.37		0.00%	0.37
9	HTC Commercial	153.10	2 year	1.23%	154.98
10	HTI Industrial	1,662.58	2 year	5.66%	1,756.68
11	High Tension-Ferro/SM/PI/SR	486.38	1 year	1.68%	494.55
12	HTAG/Agriculture	17.55	3 year	17.44%	20.61

13	Military Engineering Services/Defense Establishments	32.02	3 year	4.80%	33.55
14	Public Lighting	46.27		0.00%	46.27
15	Hoardings/Signboards	0.27		0.00%	0.27
16	HT Temporary	5.20		0.00%	5.20
17	Single Point Supply	5.38		0.00%	5.38
	Total	**4,374.09**			**4,570.01**

The Commission approves number of consumers as 724,872, connected load as 3,342,540 kW and energy sales of 4,570.01 MUsin the ARR of FY 2023-24.

5.4. Inter-State transmission loss

Petitioner's Submission

The Petitioner has considered the actual transmission losses of H1 of FY 2022-23 as the revised transmission (PGCIL) losses for the FY 2023-24 and the same has been provided in table below:

Table 57: Inter-State Transmission Loss submitted by the Petitioner (%)

Region	FY 2022-23	FY 2023-24
Western Region	2.89%	2.89%
Southern Region	6.97%	6.97%
Total	**3.55%**	**3.55%**

Commission's analysis

The Commission considers the transmission loss levels for FY 2023-24 as per the Petitioner's submission as shown in the following table:

Table 58: Inter-State Transmission Loss approved by the Commission (%)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	For Stations in Western Region (WRPC)	3.31%	2.89%	2.89%
2	For Stations in Southern Region (SRPC)	7.85%	6.97%	6.97%

The Commission approves Inter–State Transmission Loss of 2.89% for power received from stations of Western Region and 6.97% for power received from stations of Southern Region for FY 2023-24.

5.5. Intra-State Transmission &Distribution (T&D) Losses

Petitioner's Submission

The Petitioner has considered the same T&D loss as per FY 2022-23 H1 actual. Further, the Petitioner has submitted that the department has been working hard to reduce its Distribution losses to the targets approved by the Hon`ble Commission in the previous Tariff Order and has reduced some of its Distribution Loss due to implementation of SAP, R-APDRP Part A schemes, by resolving the billing issues, transition of billing and collection agencies and infusion of funds to strengthen and improve the distribution network. As the issues are resolved and data billing etc is done through SAP, the provisional actual distribution losses observed for FY 2021-22 are 8.45%. Therefore, the Petitioner has considered the distribution loss of 8.45% for FY 2023-24.

Commission's analysis

The Commission had approved loss level of 10.00% for FY 2023-24 in the Business Plan Order dated 31st March, 2022. However, while approving the T&D loss trajectory for the 3rd Control Period, the Petitioner has only submitted the details of actual T&D losses achieved in the 2nd MYT Control Period for FY 2020-21. Therefore, the Commission could not finalize the T&D loss trajectory for the 3rd control period and approved the trajectory on the provisional basis.

Now, the Petitioner has filed the true-up for FY 2017-18 to FY 2021-22 and have provided the actual T&D losses for the past years. The T&D losses approved by the Commission in the previous Control Period vis-à-vis T&D losses achieved by the Petitioner during the same period is given in the following table:

Table 59: T&D losses approved by the Commission in the 2nd MYT Control Period vis-à-vis T&D losses achieved by the Petitioner

	T&D loss (%)	
	Approved[2]	Actual (A)
FY 2019-20	10.75%	15.03%
FY 2020-21	10.50%	7.74%
FY 2021-22	10.25%	8.46%

From the above, it can be observed that there is downward trend in the T&D loss trajectory and losses for FY 2020-21 seems to be outlier. Therefore, the Commission has considered the Petitioner's submission and have approved the T&D loss of 8.45% for FY 2022-23. Further, the Commission would like to point out that approx. 54% of the total sales is at HT levels, where losses are very low. In view of the capital expenditure proposed by the Petitioner and nature of schemes planned to be carried out, the Commission opines that the Petitioner should be able to further reduce T&D losses by 0.25% annually in the 3rd MYT Control Period. The T&D loss trajectory approved by the Commission is given in the following table:

Table 60: T&D loss trajectory approved by the Commission

S. No	Particulars	FY 2022-23	FY 2023-24	FY 2024-25
1	T&D loss trajectory (%)	8.45%	8.20%	7.95%

The Commission approves the revised Intra-State T&D loss of 8.20% in the ARR of FY 2023-24.

5.6. Energy Balance

Petitioner's Submission

The Petitioner has submitted the energy balance as shown in the table below:

Table 61: Energy Balance (MUs) submitted by Petitioner for FY 2023-24

Particulars	FY 2022-23 H1			FY 2022-23 H2	FY 2022-23	FY 2023-24
	WR	SR	Total	Total	Total	Total
Energy Input at Goa Periphery	**1,980.69**	**367.72**	**2,348.41**	**2,313.93**	**4,662.34**	**4,780.60**
Total Power Scheduled/ Purchased at Goa Periphery						
Total Schedule Billed Drawal - CGS	1,761.68	331.53	2,093.21	1,670.45	3,763.66	4,169.49

[2] Business Plan Order dated 16 November, 2018.

Particulars	FY 2022-23 H1			FY 2022-23 H2	FY 2022-23	FY 2023-24
	WR	SR	Total	Total	Total	Total
Add: Overdrawal	21.23	23.76	44.98	-	44.98	-
Add: Power purchase from NVVN / Banking	(51.95)		(51.95)	48.33	(3.63)	(7.32)
Add: Power purchase from Traders	26.28	15.07	41.35	-	41.35	-
Add: Power purchase from / Open Market	43.45	24.91	68.36	348.84	417.20	-
Add : Hydro Power		-	-	-		
Less: Underdrawal	0.78	-	0.78	-	0.78	-
Add: Renewable Power	398.04	-	398.04	318.63	716.67	788.27
Less: Power diverted to Exchange	158.39	-	158.39	-	158.39	-
Total	**2,039.56**	**395.26**	**2,434.82**	**2,386.24**	**4,821.06**	**4,950.44**
PGCIL Losses - MUs	58.87	27.54	86.41	72.31	158.72	169.84
PGCIL Losses - %	2.89%	6.97%	3.55%	3.55%	3.55%	3.55%
Total Power Purchased within Goa State			-			
Add: Co-generation	46.56		46.56	92.57	139.13	154.13
Add: Independent Power Producers (IPP)			-			
Add: Net Metering	12.89		12.89	17.11	30.00	40.00
Add: PM KUSUM	-		-			
Add: Hindustan Waste Treatment Plant	2.77		2.77	5.23	8.00	8.00
Total	**62.21**	**-**	**62.21**	**114.92**	**177.13**	**202.13**
Total Power Purchase availability after PGCIL Losses	**2,042.90**	**367.72**	**2,410.62**	**2,428.85**	**4,839.47**	**4,982.73**
Power Purchase required (MU)			2,410.62	2,428.85	4,839.47	4,982.73
Less: Retail Sales to Consumers	2,215.01		2215.01	2,215.73	4,430.74	4,561.91
Distribution Losses - MUs			195.61	213.12	408.73	420.83
Distribution Losses - %			8.11%	8.77%	8.45%	8.45%

Commission's analysis

The Commission has determined the Energy Balance based on the revised estimates of energy sales. The following table provides the Energy Balance now approved by the Commission for FY 2023-24.

Table 62: Energy Balance (MUs) approved by Commission

S. No.	Particulars	Approved by the Commission
(I)	**Energy Requirement**	
1	Energy sales within the State (A)	4,570.01
2	T&D Loss (%) (B)	8.20%
3	**Energy required at State Periphery (C = A/(1-B))**	**4,978.22**
4	Within State Generation (Co-Gen) (D)	180.37
5	**Net energy required at State Periphery (E = C – D)**	**4,797.85**
(II)	**Energy Availability**	
1	Central Generating Stations including UI over/under drawl (F)	3,945.04
2	Renewable Power (G)	852.81
3	**Energy available at State Periphery (H = F + G)**	**4,797.85**
4	(Sale)/ Purchase in Open Market (I = E - H)	-
5	**Net energy available at State Periphery (J = H + I)**	**4,797.85**

The Commission approves energy requirement at state periphery of 4797.85 MUs in the ARR of FY 2023-24.

5.7. Power Purchase Quantum & Cost

Petitioners Submission

The Petitioner has projected the power purchase quantum for FY 2023-24 based on the FY 2022-23 H1 actuals and projections of FY 2022-23 H2. Further, in the projections no additional power from the market/traders/DEEP portal is considered as the major Power Purchase from Central Generating Stations. However, deficit if any shall be met from the market/exchange/DEEP portal. The table below provides the details of the power purchase projected by the Petitioner in the ARR of FY 2023-24;

Table 63: Power Purchase Quantum for FY 2023-24

Particulars	Gross Purchase	Cost	Rate
	MUs	Rs. Cr.	Rs./kWh
NTPC	3,943.93	1,297.81	3.29
NPCIL	225.55	44.73	1.98
IEX (Net of Purchase and Sales)	-	-	
IEX Purchase (Peak Hrs)	-	-	
IEX Sale (Off Peak Hrs)	-	-	
Traders	-	-	
Net Overdrawal	-	-	
Co-Generation	154.13	36.99	2.40
Renewable	836.27	343.56	4.11
Transmission		290.50	
Banking of Power (Net)	(7.32)	0.35	
Total	**5,152.57**	**2,013.94**	

Following assumptions have been considered for projecting the cost of power purchase:

Fixed Charges: The Petitioner has submitted that as CERC has still not issued the Order for most of the Plants, ED-Goa has considered actual fixed charges paid to the plant in H1 of FY 2022-23 to arrive at the revised projections of base year FY 2022-23 for respective Central Generating Stations and the same is considered for FY 2023-24.

Variable Charges: The Petitioner has considered the average of actual per unit variable costs for FY 2021-22 and escalated the same with 7 % for the revised projections of FY 2022-23 and the same is considered for FY 2023-24. The Petitioner has considered any increase in Variable Cost for FY 2023-24 and any increase will be considered as part of fuel price adjustment.

Solar and Non-solar: The Petitioner has considered the rates as per the PPA without any escalation for FY 2023-24. Further, to fulfil the RPO compliance, the deficit renewable power as per RPO is compensated by procuring renewable power (Solar and Non-Solar) from the Short-Term Market. The Petitioner has considered the market rates as per the actuals of H1 FY 2022-23 without any escalation for FY 2023-24.

The Petitioner has submitted that it has been procuring power from the Renewable Sources where 6 MW Solar Power is procured from NVVNL and 25 MW from SECI to meet its RPO obligations. Further, the Petitioner has signed Power purchase Agreement with SECI 150 MW RTC Peak Power from combined sources of Renewable Power comprising of Solar, Wind and Battery Energy Storage System (BESS) provides assured Peak Power to compensate the Peak Deficit of Goa. The project contributes to Peak Power compensation and RPO as well. The project envisages the supply to start FY 2023-24 at the rate of Rs 4.03 /unit at Goa periphery. However, the approval of CERC is awaited to initiate the commissioning of the project.

The department is also expecting the consumers to go for solar rooftops and indulge in more Net Metering/ /Gross Metering for FY 2023-24. The total Cumulative installed capacity including all types of rooftop solar and ground mounted solar as on 30.10.2022 within Goa is 32.53 MW of which, Rooftop is 23.13 MW and Ground Mounted is 9.22 MW. The Petitioner expects to receive certain power from rooftop projects for FY 2023-24.The Petitioner has submitted that any shortfall (if any) and to fulfil the Solar RPO obligation, EDG shall purchase power through short term (Traders) through DEEP portal, GTAM.

In order to meet its Non- solar RPO, the Petitioner has submitted that it would be procuring power through short term on DEEP portal. The Petitioner has procured 2.77 MUs (for FY 2022-23 H1) and it is projected to receive 5.23 MUs in FY 2022-23 H2 from Hindustan Waste Energy Ltd as it is proposed to increase the capacity of the project. Accordingly, it is projected that 8 MUs will be supplied by Hindustan Waste Energy Ltd to EDG for FY 2023-24. Further, the Petitioner is receiving the power from SECI Tranche II 50 MW Wind power and procuring the power at a rate of Rs. 2.72/unit plus trading margin of Rs. 0.07/kWh at Goa periphery since August 2022. The actual energy delivered by SECI Tranche II 50 MW, for FY 2022-23 H1 is 82.31 MU. Accordingly for FY 2023-24 it is projected as 142.18 MUs based on the Energy flow of Wind Power in the past.

The Petitioner has executed a Power Sale Agreement (PSA) on 16th August 2019 with SECI for Procurement of 50 MW Wind Power (Tranche VI) for 25 years at a fixed tariff for Rs. 2.82/kWh plus trading margin of Rs. 0.07/kWh for fulfilment of Non-Solar RPO. EDG has started receiving the Power from September 2022 and inline with the SECI Tranche II 50 MW Wind power the projections are performed for FY 2023-24. Apart from above, to meet any shortfall (if any) and to fulfil the Non-Solar RPO obligation, EDG shall purchase power through short term (Traders) through DEEP portal, GTAM.

Apart from the above sources, the Petitioner shall purchase power in Short-term from exchanges or Traders or DEEP portal to fulfil its peak requirements. Further, the Petitioner may sell surplus available during off-peak hours and would indulge in banking or sale of power in exchanges in the real time basis.

Within state generation: The Petitioner has tied up power from three Co-Generating Plants within State namely Vedanta Pvt. Ltd. Plant I, Goa Sponge and Power Limited (GSPL) and Vedanta Pvt. Ltd. Plant II. The total energy projection from above three plants for the FY 2023-24 is based on actual energy received i.e. 154.13 MUs and at the same rates

Transmission Charges: The Petitioner has considered the actual transmission charges for H1 of FY 2021-22 and calculated the transmission charges per unit for PGCIL. The same per unit rate has been considered for computation of Transmission charges for FY 2023-24 without any escalations

The total power purchase quantum and cost for each year of the MYT control period is as under:

Table 64: Power Purchase quantum (MU) and Cost (In INR Cr) submitted by Petitioner for FY 2023-24

S. No.	Source	Net Generation (MUs)	Projections of Energy Quantum (MUs)	Power Purchase Cost - Fixed Cost (FC) (INR Cr)	Power Purchase Cost - Variable Cost (VC) (INR Cr.)	Total Power Purchase Cost - (INR Cr)
A	**Central Sector Power Stations**					
I	**NTPC**	**3,943.93**	**3,779.31**	**421.43**	**876.38**	**1,297.81**
1	*KSTPS*	1,628.48	1,570.69	110.57	236.98	347.54
2	*VSTPS - I*	272.46	262.79	24.01	44.46	68.47
3	*VSTPS - II*	105.44	101.70	7.97	16.57	24.55
4	*VSTPS -III*	95.85	92.45	9.83	14.94	24.77
5	*VSTPS-IV*	117.22	113.06	17.49	18.04	35.52
6	*VSTPS-V*	53.07	51.19	8.74	8.43	17.16
7	*KGPP*	1.85	1.79	7.92	-	7.92
8	*GGPP*	4.46	4.30	8.69	-	8.69
9	*SIPAT- I*	185.06	178.49	23.51	27.66	51.18
11	*KSTPS-VII*	55.01	53.06	5.69	7.83	13.52
14	*RSTPS*	721.05	670.80	50.12	246.89	297.01
15	*SIPAT- II*	104.53	100.82	9.90	16.14	26.04
16	*Solapur*	105.90	102.14	25.10	53.76	78.85
17	*Gadarwara*	113.07	109.06	31.48	41.13	72.62
18	*Lara*	100.49	96.93	17.55	22.37	39.92
19	*Khargone*	90.98	87.75	22.08	38.94	61.02
20	*Mouda I*	87.25	84.15	19.98	37.76	57.75
21	*Mouda II*	101.76	98.15	20.80	44.49	65.29
	Add/ Less: Other Adjustments					
III	**NPCIL**	**225.55**	**217.55**	-	**44.73**	**44.73**
	KAPS	115.94	111.82	-	19.85	19.85
	TAPS	109.62	105.73	-	24.88	24.88
IV	**Short-Term Purchase**	**0.00**	**0.00**	-	**0.00**	**0.00**
	a) IEX PURCHASE AND SALES	0.00	0.00	-	0.00	0.00
	A1) IEX PURCHASE	0.00	0.00		0.00	0.00
	A2) IEX SALES	0.00	0.00	-	0.00	0.00
	b) Traders	0.00	0.00	-	0.00	0.00
V	**OVER/UNDER DRAWAL**	**0.00**	**0.00**	-	**0.00**	**0.00**
	OVER DRAWAL	0.00	0.00	-	0.00	0.00
	UNDER DRAWAL	0.00	0.00	-	0.00	0.00
VI	***Banking of Power***	**-7.32**	**-7.32**	-	**0.35**	**0.35**
B	**Within State Generations**					
I	**CO-GENERATION**	**154.13**	**154.13**	-	**36.99**	**36.99**
	Vedanta Plant-1	80.68	80.68	-	19.36	19.36
	Vedanta Plant -2	68.78	68.78	-	16.51	16.51
	Goa Sponge and private limited	4.66	4.66	-	1.12	1.12

S. No.	Source	Net Generation (MUs)	Projections of Energy Quantum (MUs)	Power Purchase Cost - Fixed Cost (FC) (INR Cr)	Power Purchase Cost - Variable Cost (VC) (INR Cr.)	Total Power Purchase Cost - (INR Cr)
C	**RPO Obligation**	**836.27**	**820.78**	**0.00**	**343.56**	**343.56**
	Solar	**331.41**	**331.41**	**0.00**	**162.65**	**162.65**
	NVVNL Solar	12.79	12.79	0.00	7.03	7.03
	Solar STOA	224.16	216.20	0.00	112.62	112.62
	SECI Solar	54.46	54.46	0.00	29.95	29.95
	Net Metering	40.00	40.00	0.00	13.04	13.04
	Non-Solar	**504.86**	**497.32**	**0.00**	**180.91**	**180.91**
	Non Solar - SECI Wind Tranche II LTOA	142.18	142.18	0.00	38.53	38.53
	STOA (Non Solar)	212.50	204.96	0.00	107.31	107.31
	SECI Tranche-VI	142.18	142.18	0.00	31.07	31.07
	Hindustan waste treatment plant Goa	8.00	8.00	0.00	4.00	4.00
D	**REC Certificates**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
E	**OTHER CHARGES**					
	PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges				290.50	290.50
F	**Total**	**5152.57**	**4964.44**	**421.43**	**1592.51**	**2013.94**

Commission's analysis

5.7.1. Power Purchase Quantum

Availability of energy from NTPC and NPCIL Stations:

The Commission analysed the energy availability from NTPC and NPCIL Power Stations for the last 2 years and found it in line with the Petitioner's projections for FY 2022-23. Therefore, the Commission has estimated energy availability for FY 2023-24 as the higher of the actual energy availability for FY 2021-22 and the projected energy availability for FY 2022-23.

Availability of energy from Vedanta and Goa Sponge Stations

The Commission analysed the energy availability from within state Power Stations for the last 2 years and found it in line with the Petitioner's projections for FY 2022-23. Therefore, the Commission has estimated energy availability for FY 2023-24 as the higher of the actual energy availability for FY 2021-22 and the projected energy availability for FY 2022-23.

Availability of energy from Renewable Sources

The Commission has considered the energy availability from the renewable sources in line with the Petitioner's submission.

Further, the banking quantum has been considered as per the Petitioner's submission and the excess available energy has been assumed to be sold off in open market.

5.7.2. Power Purchase Cost

The Commission has computed the power purchase cost for the FY 2023-24 based on the following assumptions:

Variable Charges:

The variable charges for the existing plants have been considered based on the provisional actual cost submitted by the Petitioner for FY 2021-22 and for initial 9 months of FY 2023-24. For Central generating Stations, the Commission has segregated the plants into two buckets for projecting the variable charges. The Commission has considered the variable cost in line with per unit cost submitted by the Petitioner for Q4 of FY 2022-23 for the plants facing a reasonable hike in variable charges over FY 2021-22.

For the plants witnessing an exorbitant increase in the variable charges over FY 2021-22, mainly on account of increase in coal prices or blending of import coals, the variable charges have been projected considering the variable charges of FY 2021-22 and escalating it twice by 10% for reflecting the variable charges for FY 2023-24. For the remaining plants, the Commission has accepted the variable charges submitted by the Petitioner.

Fixed Charges:

The fixed charges for the existing plants have been considered based on the projected cost submitted by the Petitioner for FY 2022-23.

Other Charges:

Other charges have not been considered for the FY 2023-24. The same shall be considered as per actuals at the time oftrue-up of FY 2023-24.

5.7.3. Transmission Charges

The Commission has projected the transmission charges payable to PGCIL based on the projected cost submitted by the Petitioner for FY 2022-23.

5.7.4. Total power purchase quantum and cost

The power purchase cost approved by the Commission forthe FY 2023-24 have been shown in the following tables:

Table 65: Power Purchase Quantum (MUs) and cost (INR Cr) approved for the FY 2023-24

S. No.	Source	Projections of Energy Quantum at State Periphery (MUs)	Fixed Cost (FC) (INR Cr)	Variable Cost (VC) (INR Cr.)	Total Power Purchase Cost (FC+VC) (INR Cr)
A	**Central Sector Power Stations**				
I	**NTPC**	**3,832.96**	**425.19**	**866.76**	**1,291.96**
1	*KSTPS*	1,631.78	110.59	254.34	364.93
2	*VSTPS - I*	266.97	23.95	43.41	67.36
3	*VSTPS - II*	112.94	8.06	17.38	25.44
4	*VSTPS -III*	93.08	9.83	14.47	24.30
5	*VSTPS-IV*	113.83	17.49	17.62	35.10
6	*VSTPS-V*	51.54	8.74	8.26	17.00
7	*KGPP*	1.80	7.87	-	7.87
8	*GGPP*	4.33	9.10	-	9.10
9	*SIPAT- I*	194.68	25.51	35.57	61.07
11	*KSTPS-VII*	53.42	6.35	7.99	14.33
14	*RSTPS*	612.13	50.05	219.13	269.18
15	*SIPAT- II*	101.51	9.66	19.21	28.87
16	*Solapur*	69.43	25.33	31.72	57.05
17	*Gadarwara*	117.34	31.65	45.28	76.94
18	*Lara*	97.59	17.54	25.33	42.87
19	*Khargone*	88.35	22.42	32.26	54.68
20	*Mouda I*	94.60	19.68	39.71	59.40
21	*Mouda II*	127.64	21.36	55.11	76.48
	Add/ Less: Other Adjustments				

S. No.	Source	Projections of Energy Quantum at State Periphery (MUs)	Fixed Cost (FC) (INR Cr)	Variable Cost (VC) (INR Cr.)	Total Power Purchase Cost (FC+VC) (INR Cr)
III	**NPCIL**	**224.80**	**-**	**66.01**	**66.01**
	KAPS	112.59	-	26.45	26.45
	TAPS	112.22	-	39.56	39.56
IV	**Short-Term Purchase**	**(105.41)**	**-**	**(46.45)**	**(46.45)**
	a) IEX PURCHASE AND SALES	(105.41)	-	(46.45)	(46.45)
	A1) IEX PURCHASE			-	-
	A2) IEX SALES	105.41	-	46.45	46.45
	b) Traders		-	-	-
V	**OVER/ UNDER DRAWAL**	**0.00**	**-**	**0.00**	**0.00**
	OVER DRAWAL	0.00	-	0.00	0.00
	UNDER DRAWAL	0.00	-	0.00	0.00
VI	***Banking of Power***	**-7.32**	**-**	**0.35**	**0.35**
B	**Within State Generations**				
I	**CO-GENERATION**	**180.37**	**-**	**43.29**	**43.29**
	Vedanta Plant-1	97.39	-	23.37	23.37
	Vedanta Plant -2	78.32	-	18.80	18.80
	Goa Sponge and private limited	4.66	-	1.12	1.12
C	**RPO Obligation**	**852.81**	**0.00**	**355.32**	**355.32**
				-	-
	Solar	**322.69**	**0.00**	**158.58**	**158.58**
	NVVNL Solar	13.22	0.00	7.27	7.27
	Solar STOA	216.06	0.00	108.89	108.89
	SECI Solar	53.42	0.00	29.38	29.38
	Net Metering	40.00	0.00	13.04	13.04
				-	-
	Non-Solar	**530.13**	**0.00**	**196.74**	**196.74**
	Non Solar - SECI Wind Tranche II LTOA	139.09	0.00	37.69	37.69
	STOA (Non Solar)	240.85	0.00	121.63	121.63
	SECI Tranche-VI	142.18	0.00	33.41	33.41
	Hindustan waste treatment plant Goa	8.00	0.00	4.00	4.00
D	**REC Certificates**	**0.00**	**0.00**	**13.43**	**13.43**
E	**OTHER CHARGES**				
	PGCIL Transmission Charges, Wheeling, Open Access & Trading Margin & Other Charges			303.70	303.70
F	**Total**	**4,978.22**	**425.19**	**1,602.41**	**2,027.60**

Therefore, the Commission approved the power purchase quantum of 4978.22 MUs at Goa state periphery and the power cost of INR 2027.60 crore in the ARR of FY 2023-24.

5.7.5. Net Power Purchase Cost

The generating companies and transmission licensees provides 1.5% rebate on the bills on payment within 5 days from the production of such bills and 1% rebate on payment within 30 days from production of such bills. Since adequate interest for working capital is provided in the ARR, the Petitioner shall take every effort to make payment of the bills of Gencos and Transcos at atleast within one month from production of such bills so as to avail this opportunity and reduce their power purchase costs. Accordingly, the Commission approved power purchase cost (net of rebate) in line with the APTEL's order dated 30th July 2010 in Appeal No. 153 of 2009 as detailed below:

Table 66: Net Power Purchase Cost approved by the Commission for FY 2023-24

Particular	FY 2023-24
Total Power Purchase Cost including transmission charges (INR Cr)	2,027.60
Less: Rebate @1% (INR Cr)	20.28
Net Power Purchase Cost (INR Cr)	**2,007.32**

The rebate computed above has been considered as part of Non-Tariff Income in Section 5.19.

The Average Power Purchase Cost (APPC) for the FY 2023-24 has been determined as provided in the table below. The APPC has been computed at the state Periphery excluding the transmission charges and cost of purchase of renewable energy. The Petitioner shall use the same for the purpose of compensation/payment of surplus power at the end of each settlement period in case of Solar Net-metering consumers.

Table 67: Average Power Purchase Cost (APPC) for the FY 2023-24

Particular	FY 2023-24
Total Power Purchase Cost (INR Cr)	2027.60
Less: Transmission charges and Power Purchase cost from renewable energy sources (INR Cr)	672.45
Net Power Purchase Cost (INR Cr) (A)	**1355.15**
Total Power Purchase quantum (MU)	5126.63
Less: Quantum from renewable energy sources (MU)	852.81
Quantum of energy excluding quantum from renewable energy sources (MU) (B)	**4273.82**
APPC (INR/kWh) (A/B)	**3.17**

The Commission approves the Average Power Purchase Cost (APPC) as INR3.17/ kWh for the FY 2023-24.

5.8. Renewable Purchase Obligation

Petitioner's Submission:

The Petitioner has submitted it envisages to meet its RPO obligation through purchase of physical renewable power and may even exceed the RPO obligations as cheap power is available in the market, in comparison to the conventional sources. Further, after considering all the proposed tied-up renewable energy, ED-Goa proposes

to meet any shortfall to fulfill the RPO obligation, through purchase from short term (Traders) through DEEP portal, GTAM. For projection of ED-Goa plans to buy REC for FY 2023-24. Accordingly, the Petitioner has submitted its RPO plan for FY 2023-24 as follows:

Table 68: RPO plan submitted by the Petitioner for the FY 2023-24 (MU)

S. No.	Description	Unit	Projections
			FY 2023-24
1	Sales Within State (As approved in Order dt. 31-03-2022)	MUs	**4385.84**
2	RPO Obligation	%	19.91%
	Solar	%	10.00%
	Non Solar	%	9.25%
	HPO	%	0.66%
3	RPO Obligation	**MUs**	**873.22**
	Solar	MUs	438.58
	Non Solar	MUs	405.69
	HPO	MUs	28.95
4	Power Purchase	**MUs**	**836.27**
	Solar	MUs	331.41
	Non Solar	MUs	504.86
	HPO	MUs	0.00

Commission's analysis:

The Commission has approved the Renewable Purchase Obligation (RPO) for FY 2022-23 considering the JERC (Procurement of Renewable Energy) Regulations, 2010, as amended from time to time. Further, the cumulative backlog of solar and non-solar compliance up to FY 2022-23 has been considered as per the APR for FY 2022-23. Accordingly, the RPO approved by the Commission in the APR of FY 2022-23 is as follows:

Table 69: Renewable Purchase Obligation (RPO) approved by the Commission for FY 2023-24

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Sales within State (MU) (A)	3767.16	4,018.22	4,374.09	4,540.30
Hydro Power available at State Periphery (MU) (B)	0.00	-	-	-
T&D Loss (%) (C)	7.74%	8.46%	8.45%	8.20%
T&D Loss (MU) (D = B * C)	0.00	-	-	-
Hydro Power Consumed (E = B - D)	0.00	-	-	-
Conventional Power Consumed (F = A - E)	**3767.16**	**4,018.22**	**4,374.09**	**4,540.30**
RPO obligation (%)	**14.10%**	**17.00%**	**18.35%**	**19.91%**
Solar (G)	6.10%	8.00%	9.00%	10.00%
Non-Solar (H)	8.00%	9.00%	9.35%	9.91%
RPO obligation for the year (MU)	**531.17**	**683.10**	**802.65**	**903.97**
Solar (F * G)	229.80	321.46	393.67	454.03
Non-Solar (F * H)	301.37	361.64	408.98	449.94
RPO Compliance from Physical Power (MU)	**506.83**	**626.81**	**737.29**	**852.81**
Solar	148.16	307.90	312.69	322.69
Non-Solar	358.67	318.91	424.60	530.13

Particulars	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Standalone RPO Compliance Backlog (MU)	**81.64**	**56.29**	**80.98**	**51.16**
Solar	81.64	13.56	80.98	131.34
Non-Solar	-	42.73	-	(80.18)
Cumulative RPO Compliance Backlog (MU)	**145.42**	**201.70**	**267.06**	**318.22**
Solar	81.64	95.19	176.17	307.51
Non-Solar	63.78	106.51	90.89	10.71

The Commission notes that there is a net shortfall in RPO compliance for FY 2023-24 (51.16 MU) and cumulative shortfall of 318.22 MU till FY 2023-24. The Commission also directs the Petitioner to complete the RPO obligation on priority.

The Commission has continuously directed the Petitioner to complete the RPO obligation on priority, but there has been no improvement therefore the Commission directs the Petitioner to procure the shortfall for the FY 2023-24 through REC. The Commission accordingly has allowed the REC cost based on the average per kWh price from December 2022 to February 2023. The cost approved is as follows:

Table 70: REC cost approved by the Commission for FY 2023-24 (INR Crore)

S. No	Particulars	Average per kWh price from Dec 2022 to Feb 2022 (INR/kWh)	Shortfall(MU)	Now Approved by Commission
1	REC cost	1.00	131.34	13.13

5.9. Operation & Maintenance Expenses

The Operation & Maintenance Expenses comprise of the Employee Expenses, Administrative and General Expenses (A&G) and the Repair & Maintenance Expenses (R&M). Regulation 61 of the JERC MYT Regulation, 2021 states the following:

"61.1 The Operation and Maintenance Expenses for the Retail Supply Business shall be computed in accordance with this Regulation.

61.2 O&M Expenses shall comprise of the following:

a) Employee expenses - salaries, wages, pension contribution and other employee costs;

b) Administrative and General expenses including insurance charges if any; and

c) Repairs and Maintenance expenses.

61.3 The Licensee shall submit the required O&M expenses for the Control Period as a part of Multi Year Tariff Petition. O&M expenses for the base Year shall be approved by the Commission taking into account the latest available audited accounts, business plan filed by the Distribution Licensee, estimates of the actuals for the Base Year, prudence check and any other factors considered appropriate by the Commission.

61.4 O&M expenses for the nth Year of the Control Period shall be approved based on the formula given below:

O&Mn = (R&Mn + EMPn + A&Gn) x (1 - Xn) + Terminal Liabilities

Where,

R&Mn = K x GFAn-1 x (1+WPIinflation)

EMPn = (EMPn-1) x (1+Gn) x (1+CPIinflation)

A&Gn = (A&Gn-1) x (1+CPIinflation)

'K' is a constant (expressed in %). Value of K for each Year of the Control Period shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking of repair and maintenance expenses, approved repair and maintenance expenses vis-à-vis GFA approved by the Commission in past and any other factor considered appropriate by the Commission;

CPI inflation – is the average increase in Consumer Price Index (CPI) for immediately preceding three (3) Years before the base Year;

WPI inflation – is the average increase in the Wholesale Price Index (CPI) for immediately preceding three (3) Years before the base Year;

EMPn – Employee expenses of the Distribution Licensee for the nth Year;

A&Gn – Administrative and General expenses of the Distribution Licensee for the nth Year;

R&Mn – Repair and Maintenance expenses of the Distribution Licensee for the nth Year;

GFAn-1 – Gross Fixed Asset of the Distribution Licensee for the n-1th Year;

Xn is an efficiency factor for nth Year. Value of Xn shall be determined by the Commission in the Multi Year Tariff Order based on Licensee's filing, benchmarking, approved cost by the Commission in past and any other factor the Commission feels appropriate;

Gn is a growth factor for the nth Year. Value of Gn shall be determined by the Commission for each Year in the Multi Year Tariff Order for meeting the additional manpower requirement based on Licensee's filings, benchmarking, approved cost by the Commission in past and any other factor that the Commission feels appropriate:

Provided that in case the Licensee has been in operation for less than three (3) Years as on the date of effectiveness of these Regulations, the O&M Expenses shall be determined on a case to case basis.

61.5 Terminal liabilities of employees of Licensee including pension expenses etc. shall be approved as per actuals submitted by the Licensee, subject to prudence check or be established through actuarial studies. Additionally, any variation due to changes recommended by the pay commission shall be allowed separately by the Commission, subject to prudence check.

61.6 For the purpose of estimation, the same value of factors – CPI inflation and WPI inflation shall be used for all Years of the Control Period. However, the Commission shall consider the actual values of the factors – CPI inflation and WPI inflation during the truing up exercise for the Year for which true up is being carried out and true up the O&M Expenses for that Year, only to the extent of inflation.

Provided that at the time of truing up, the variation in the normative and actual O&M expenses shall be dealt in accordance with Regulation 15."

5.9.1. Employee Expenses

Petitioner's Submission

The Petitioner has projected the employee expenses for FY 2023-24 as INR 435.52 crore as against the approved employee expenses of INR 354.39 crore in the MYT Order.

Commission's analysis

In accordance with the JERC MYT Regulations, 2021, the Commission has determined the Employee expenses for each year of the MYT Control Period. The Regulation 6 of the JERC MYT Regulations, 2021 stipulates the following:

"6. Values for Base Year

6.1 The values for the Base Year of the Control Period shall be determined on the basis of the audited accounts or provisional accounts of last three (3) Years, and other factors considered relevant by the Commission:

Provided that, in absence of availability of audited accounts or provisional accounts of last three (3) Years, the Commission may benchmark the parameters with other similar utilities to establish the values for Base Year:

Provided further that the Commission may change the values for Base Year and consequently the trajectory of parameters for Control Period, considering the actual figures from audited accounts."

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the employee expenses trajectory on provisional basis. The Commission now has finalized the true-up of FY 2017-18, FY 2018-19 and FY 2019-20 and has also received the audited accounts of FY 2020-21 and FY 2021--22. Therefore, the Commission finds it prudent to revise the employee expenses trajectory for the 3rd control period. Therefore, the Commission has considered the actual audited figures of employee expenses from FY 2018-19, FY 2019-20 and FY 2020-21 as follows:

Table 71: Computation of Base Employee Expenses (INR Cr.)

Particulars	FY 2018-19	FY 2019-20	FY 2020-21
Base Employee Expenses (including impact of 7th Pay Commission Arrears and Terminal Benefits)	325.73	340.39	332.21
Less: Impact of 7th Pay Commission Arrears	-	-	-
Less: Terminal Benefits	3.98	3.77	3.43
Employee Expenses	**321.75**	**336.62**	**328.78**
Base Employee Expenses (Avg.)		**329.05**	
CPI (FY 2017-18 to FY 2019-20)		**5.35%**	
CPI (FY 2018-19 to FY 2020-21)		**6.00%**	
Approved Base Employee Expenses		**367.47**	

The average of these three years i.e. FY 2018-19 to FY 2020-21 has been considered as employee expenses for the FY 2019-20. This has been escalated with the average CPI Inflation of the last two years to arrive at the employee expenses for the Base Year i.e. FY 2021-22. The resultant employee expenses of the Base Year have been escalated by Growth Rate as per manpower submitted by the Petitioner and the average CPI Inflation of the last three years to arrive upon the employee expenses of FY 2022-23 and FY 2023-24. The Terminal Benefits for each year has been allowed separately based on the average of Terminal Benefits from FY 2018-19 to FY 2020-21 as per the audited accounts. The same shall be allowed as per actuals during the time of truing up of the respective years. The CPI inflation has been computed as follows:

Table 72: CPI inflation computed for 3rd Control Period

<table>
<tr><th>FY</th><th>Average of (April – March)</th><th>Increase in CPI Index</th><th colspan="2">Average increase In CPI indices over 3 year</th></tr>
<tr><td>FY 2017-18</td><td>284.42</td><td></td><td rowspan="4">6.00%</td><td></td></tr>
<tr><td>FY 2018-19</td><td>299.92</td><td>5.45%</td><td rowspan="4">5.89%</td></tr>
<tr><td>FY 2019-20</td><td>322.50</td><td>7.53%</td></tr>
<tr><td>FY 2020-21</td><td>338.69</td><td>5.02%</td></tr>
<tr><td>FY 2021-22</td><td>356.06</td><td>5.13%</td><td></td></tr>
</table>

Further, the Petitioner has provided the details of manpower details including the recruitment and retirement for FY 2022-23 and FY 2023-24. The Commission has considered the same while approving the normative

employee expenses for FY 2022-23 and FY 2023-24. For the FY 2024-25, the Commission has considered the growth rate of Nil subject to true-up. The table below provides the manpower details for the control period:

Table 73: Manpower plan submitted by the Petitioner for the Control period

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening Employee	5920	6281	6372
Recruitment	434	255	-
Retirement	73	164	-
Closing Employee	6281	6372	6372
Growth rate	**6.10%**	**1.45%**	**0.00%**

Accordingly, the employee expenses approved by the Commission in the ARR of FY 2023-24 have been provided in the following table:

Table 74: Employee Expense approved by the Commission for 3rd Control Period

Particulars	Base Year (FY 2021-22)	FY 2022-23	FY 2023-24	FY 2024-25
Gn (Growth factor as per the Manpower Plan submitted by the Petitioner)		6.10%	1.45%	0.00%
CPI (3 previous year avg.) (in %)		5.89%	5.89%	5.89%
Base Employee Expenses (INR Cr)	**367.47**	**412.85**	**443.52**	**469.65**
Terminal Benefits		3.73	3.73	3.73
Total Employee Expenses		**416.58**	**447.25**	**473.38**

The Commission approves the revised Employee Expenses of INR 447.25 Crore in the ARR of FY 2023-24.

5.9.2. Administrative and General (A&G) Expenses

Petitioner's Submission

The Petitioner has projected the A&G expenses of INR 35.73 crore vis-à-vis the approved A&G Expenses of INR 36.11 crore in the MYT Order.

Commission's analysis

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the A&G expenses trajectory on provisional basis. The Commission now has finalized the true-up of FY 2017-18, FY 2018-19 and FY 2019-20 and has also received the audited accounts of FY 2020-21 and FY 2021-22. Therefore, the Commission finds it prudent to revise the A&G expenses trajectory for the 3rd control period. The Commission has considered the audited figures of A&G expenses from FY 2018-19 to FY 2020-21 as follows:

Table 75: Actual A&G Expenses from FY 2018-19 to FY 2020-21 (INR Crore)

Particulars	As per Audited Accounts
FY 2018-19	27.42
FY 2019-20	26.91
FY 2020-21	26.20
Avg. A&G expenses	**26.84**
CPI (FY 2017-18 to FY 2019-20)	**5.35%**
CPI (FY 2018-19 to FY 2020-21)	**6.00%**
Approved Base A&G Expenses	**29.98**

The average A&G expenses estimate has been escalated by the average CPI Inflation of the last three years to arrive at the A&G expenses for the Base Year i.e. FY 2021-22. The resultant A&G expenses of the Base Year has been escalated by the average CPI Inflation of the last three years to arrive upon the A&G expenses of each year of the3rdControl Period. The A&G expenses approved by the Commission in the MYT Control Period have been provided in the following table:

Table 76: A & G Expense approved by the Commission for 3rd Control Period

Particular	Base Year	ARR		
	FY 2021-22	FY 2022-23	FY 2023-24	FY 2024-25
CPI (3 previous year avg.) (in %)		5.89%	5.89%	5.89%
Total A&G Expenses	**29.98**	**31.74**	**33.61**	**35.60**

Therefore, the Commission approves the revised Administrative & General (A&G) expenses of INR 33.61 Crore in the ARR of FY 2023-24.

5.9.3. Repair & Maintenance Expenses (R&M)

Petitioner's Submission

The Petitioner has projected the R&M Expenses of INR 54.62 Crore in the ARR of FY 2023-24 against the approved R&M Expenses of INR 82.28 crore in the MYT Order.

Commission's analysis

In the MYT Order dated 31st March 2022, the Commission observed that the Petitioner has failed to submit the audited accounts for FY 2017-18, FY 2018-19, FY 2019-20 and FY 2020-21 and therefore, decided to approve the A&G expenses trajectory on provisional basis. The Commission now has finalized the true-up of FY 2017-18, FY 2018-19 and FY 2019-20 and has also received the audited accounts of FY 2020-21 and FY 2021-22. Further, the Commission has noted that due to the impact of COVID-19 very minimal R&M activities were undertaken during the financial year FY 2020-21. Therefore, the 'K' factor has been determined as the ratio of R&M to opening GFA for the FY 2017-18, FY 2018-19 and FY 2019-20 and averaged for three years. The 'K' factor has been computed as follows:

Table 77: 'K' computation by the Commission for 3rd MYT Control Period

Particulars	FY 2017-18	FY 2018-19	FY 2019-20
R&M Expenses	27.05	26.32	32.98
Opening GFA (GFAn-1)	1216.92	1236.61	1274.13
K Factor (%)	2.22%	2.13%	2.59%
K Factor Approved by the Commission (Average of 3 years) (%)			**2.31%**

The 'K' factor is kept constant for all the years and multiplied with the opening GFA approved for the (n-1)th year. The resultant amount is then escalated by WPI Inflation to arrive upon the R&M Expenses for each year of the Control Period. The WPI Inflation has been computed as follows:

Table 78: WPI inflation computed for 3rd MYT Control Period

FY	Average of (April – March)	Increase in WPI Index	Average increase In CPI indices over 3 year
FY 2018-19	119.79		5.32%
FY 2019-20	121.80	1.68%	
FY 2020-21	123.38	1.29%	
FY 2021-22	139.41	13.00%	

The R&M expenses approved by the Commission for each year of the 3rdMYT Control Period have been provided in the following table:

Table 79: R&M Expense approved by the Commission for the 3rd MYT Control Period (in INR Cr.)

Particulars	FY 2022-23	FY 2023-24	FY 2024-25
Opening GFA (GFAn-1)	1606.92	2008.54	2732.13
K Factor (%)	2.31%	2.31%	2.31%
Avg. WPI Inflation (%)	5.32%	5.32%	5.32%
R&M Expenses = K x (GFA n-1) x (1+WPIinflation)	**39.15**	**48.93**	**66.56**

The Commission therefore approves the revised Repair & Maintenance (R&M) expenses of INR 48.93 Crore in the ARR of FY 2023-24.

5.9.4. Summary of O&M Expenses

The Summary of O&M expenses projected by the Petitioner and approved by the Commission in the ARR of FY 2023-24 have been provided in the following table:

Table 80: Summary of O&M expenses approved by the Commission for FY 2023-24 (in INR Cr.)

Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Employee Expenses	354.39	435.52	447.24
A&G expenses	36.11	35.73	33.61
R&M Expenses	82.28	54.62	48.93
Total O&M expenses	**472.78**	**525.87**	**529.79**

The Commission approves the O&M Expenses of INR 529.79 crore in the ARR of FY 2023-24.

5.10. Gross Fixed Assets (GFA) and Capitalization

Petitioner's Submission

The Petitioner has submitted capitalization of INR1067.75 Crore during the FY 2023-24 against approved capitalisation of INR723.59 Crore in the MYT Order dated 31stMarch 2022. The table below provides the summary of capital expenditure and capitalisation undertaken by the department during FY 2023-24:

Table 81: Details of capital expenditure and capitalisation submitted by the Petitioner for FY 2023-24 (INR Crore)

S. No.	Name of scheme	Capital expenditure		Capitalisation	
		FY 2023-24	FY 2023-24	FY 2023-24	FY 2023-24
		Approved	Revised Projection	Approved	Revised Projection
Existing Schemes					
A1	Schedule Tribe Development Scheme (P)		38.83		44.83
A2	Infrastructure development through Electricity Duty (Plan)	39.01	69.21	39.01	63.20
A3	Erection and Augmentation of 33/11 KV S/S line (Plan)		10.00		10.00
A4	Normal Development Schemes (Plan)	6.00	6.00	6.00	6.00
A5	System Improvement Schemes (Plan)		6.00		6.00
A6	Construction of staff quarters and office buildings (Plan)		26.00		5.00
A7	Strengthening of 220 KV Transmission Network		21.00		21.00

S. No.	Name of scheme	Capital expenditure		Capitalisation	
		FY 2023-24	FY 2023-24	FY 2023-24	FY 2023-24
		Approved	Revised Projection	Approved	Revised Projection
A8	Erection of 220/110/33/11 KV Sub-Station at Verna (New)		-		-
A9	Restructured Accelerated Power Development and Reforms Programme Part A		5.00		-
A10	Underground Cabling		117.50		229.50
A11	R-APDRP Part B / IPDS		-		-
A12	EHV new Transmission / Sub-Station / Capacitor banks schemes		-		-
B1	Smart grid Development of existing network		-		-
B2	Sub-transmission and distribution improvement scheme		20.00		20.00
	Sub- Total (existing schemes)	**45.01**	**319.54**	**45.01**	**405.63**
New Schemes					
A	**Projects with Administrative approval**	74.75	113.72	74.75	73.72
B	**Projects Approved by EFC**	96.84	286.00	96.84	153.00
C	**Projects tendered (To start next year)**	62.00	117.84	82.00	132.84
D	**New EHV Works**	0.00	272.00	0.00	62.00
E	**REVAMPED Distribution Projects**	450.00	240.56	425.00	240.56
F	**Sub-Total New Schemes**	**683.58**	**1030.12**	**678.58**	**662.12**
G	**Existing Schemes + New Schemes**	**728.59**	**1349.66**	**723.59**	**1,067.75**
	TOTAL	**728.59**	**1,349.66**	**723.59**	**1,067.75**
H	**DEPOSIT WORKS**	0.00	18.90	0.00	50.94
	GRAND TOTAL	**728.59**	**1,368.56**	**723.59**	**1,118.69**

Commission's analysis:

The Commission has noted that the Petitioner has claimed higher capital expenditure and capitalisation for FY 2023-24 vis-à-vis the capital expenditure and capitalisation as approved in the MYT Order. The Commission sought the details for additional capital expenditure in the deficiency note. The Petitioner submitted that apart from the schemes approved by the Commission in the Business Plan, the Petitioner has undertaken some new schemes. However, the Commission is yet to receive the details of new schemes including the proposed capital expenditure, DPR, cost benefit analysis etc. Further, the Commission has considered the schemes for capitalisation for which the specific approval in the Business Plan has been accorded. In case, the Petitioner is deviating from the approved schemes, then a separate petition with the justified reasons and the necessity for the schemes to be executed beyond the business plan order needs to be filed before the Commission for appropriate decision in this regard.

In view of the above, the Commission has considered the Capital expenditure and capitalization provisionally as approved in the MYT Order for FY 2023-24, however, the same shall be trued-up as per actuals at the time of

true-up. Further, the Petitioner is directed to provide details of new schemes while filing true-up for FY 2023-24. The following table provides the summary of capital expenditure and capitalization now approved by the Commission:

Table 82: Capital Expenditure & Capitalisation considered by the Commission for the FY 2023-24 (INR Crore)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by Commission
Total Capital Expenditure	728.59	1349.66	728.59
Total Capitalisation	723.59	1067.75	723.59

5.11. Capital Structure

Petitioner's Submission

The Petitioner submitted that most capital assets are created out of the equity contribution from Government of Goa and the remaining assets have been created through grants and Electricity Fund. The table below provides the details of sources of funds for the FY 2023-24:

Table 83: Opening & Closing GFA for FY 2022-23

S. No.	Sources of Funds	FY 2023-24
A	**Total Capital Expenditure (without deposit works)**	**1,349.66**
B	Electricity Duty Fund	702.77
C	Grant	112.58
D	**Total Capital Expenditure (excluding Electricity Duty Fund and Grant) (A-B-C)**	**534.31**
E	Debt (%)	70%
F	Equity (%)	30%
G	**Normative Debt (D x E)**	**374.01**
H	**Equity (INR Cr) (D x F)**	**160.29**

Commission's analysis

Regulation 27 of the JERC MYT Regulations, 2021 specifies the following:

"27.1 In case of Existing Projects, debt to equity ratio allowed by the Commission for determination of tariff for the period ending March 31, 2022 shall be considered:

Provided that in case of retirement or replacement or De-capitalisation of the assets, the equity capital approved as mentioned above, shall be reduced to the extent of 30% (or actual equity component based on documentary evidence, if it is lower than 30%) of the original cost of such assets:

Provided further that in case of retirement or replacement or De-capitalisation of the assets, the debt capital approved as mentioned above, shall be reduced to the extent of outstanding debt component based on documentary evidence, or the normative loan component, as the case may be, of the original cost of such assets.

27.2 For New Projects, the debt-equity ratio as on the Date of Commercial Operation shall be 70:30 of the amount of capital cost approved by the Commission under Regulation 24, after prudence check for determination of tariff:

Provided that where equity actually deployed is less than 30% of the capital cost of the capitalised asset, the actual equity shall be considered for determination of tariff:

Provided also that if the equity actually deployed is more than 30% of the capital cost, equity in excess of 30% shall be treated as a normative loan for the Licensee for determination of tariff:

Provided also that the Licensee shall submit documentary evidence for the actual deployment of equity and explain the source of funds for the equity:

Provided also that the equity invested in foreign currency shall be designated in Indian rupees on the date of each investment:

Provided further that the premium, if any, raised by the Licensee while issuing share capital and investment of internal resources created out of its free reserves, for the funding of the scheme,

shall be reckoned as paid up capital for the purpose of computing return on equity, provided such premium amount and internal resources are actually utilised for meeting the capital expenditure of the transmission system or the distribution system, and are within the ceiling of 30% of capital cost approved by the Commission.

27.3 Any expenditure incurred or projected to be incurred on or after April 1, 2022, as may be admitted by the Commission, as additional capital expenditure for determination of tariff, and renovation and modernisation expenditure for life extension shall be serviced in the manner specified in these Regulations"

The Commission has considered the closing values of GFA, loan and equity as approved in APR of FY 2022-23 to arrive at the opening values of GFA, loan and equity for FY 2023-24. The Capital Structure approved by the Commission for FY 2023-24 is shown in the following tables:

Table 84: Capital Structure considered by the Commission for FY 2023-24 (INR Cr.)

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	**Total Capitalisation**	**723.59**	**1067.75**	**723.59**
2	Less Capitalisation through Grant & Consumer Contribution	473.35	502.34	473.35
	Electricity Duty Fund	218.10	321.76	218.10
	Grant & Consumer Contribution	255.25	180.58	255.25
3	**Net Capitalisation excluding Electricity Duty Fund & Govt. Grants**	**250.24**	**565.41**	**250.24**
4	Debt (%)	70%	70%	70%
5	Equity (%)	30%	30%	30%
6	**Normative Loan**	**175.17**	**395.78**	**175.17**
7	**Normative Equity**	**75.07**	**169.62**	**75.07**

Table 85: GFA (including GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution) considered by the Commission for FY 2023-24 (INR Cr.)

Sl. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	Opening Gross Fixed Assets	3,054.90	1,566.39	2,008.54
2	Addition During the FY	723.59	401.62	1,067.75
3	Adjustment/Retirement During the FY	-		0.00
4	Closing Gross Fixed Assets	3,778.49	1,968.01	2732.13

Table 86: GFA (excluding GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution) considered by the Commission for 3rd MYT Control Period (INR Cr.)

Sl. No.	Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
1	Opening Gross Fixed Assets	1493.43	1454.50	1428.34
2	Addition During the FY	250.24	565.41	250.24
3	Adjustment/Retirement During the FY	0.00	0.00	0.00
4	Closing Gross Fixed Assets	1743.67	2019.91	1678.58

5.12. Depreciation

Petitioner's Submission

The Petitioner submitted that the closing GFA of the FY 2022-23 as arrived at APR has been considered as opening GFA of the FY 2023-24. Further, depreciation for each year has been computed on average Gross Fixed Assets (GFA) after considering the net addition proposed during each year.

The Petitioner submitted that total depreciation is calculated asset block wise on the total GFA. However, since depreciation on assets created through grants, electricity duty fund or subsidies are not allowed as per Regulations. Hence, Depreciation for the GFA excluding grant and electricity duty fund arrived in the proportion of total GFA and GFA excluding grant and electricity duty fund.

Based on the methodology given in JERC MYT Regulations, depreciation for the FY 2023-24 is projected as under:

Table 87: Depreciation submitted by the Petitioner for the FY 2023-24(INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission
Opening Gross Fixed Assets (excluding Grants/ consumers Contribution etc)	1493.43	1454.50
Add: Gross Asset Addition	250.24	1,067.75
Less: Contribution from Subsidies/ Grants/ Beneficiaries' Contribution / Consumers Contribution		502.34
Value of Asset eligible for depreciation		565.41
Add: Addition During the Year		565.41
Less: Decapitalisation	0.00	
Closing Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	1743.67	2019.91
Average Gross Fixed Assets (excluding Grants/ consumers Contribution etc.)	1618.55	1737.20
Depreciation	**61.84**	**77.75**
Wt. Avg Rate of Depreciation	**3.82%**	**4.48%**

Commission's analysis

Regulation 31 of the JERC MYT Regulations, 2021 stipulates the following:

"31.1 The value base for the purpose of depreciation shall be the capital cost of the asset admitted by the Commission:

Provided that the depreciation shall be allowed after reducing the approved original cost of the retired or replaced or decapitalized assets:

Provided also that the no depreciation shall be allowed on the assets financed through consumer contribution, deposit work, capital subsidy or grant.

31.2 The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to a maximum of 90% of the capital cost of the asset.

Provided further that the salvage value of Information Technology equipment and computer software shall be considered at zero (0) per cent of the allowable capital cost.

31.3 Land other than the land held under lease shall not be a depreciable asset and its cost shall be excluded from the capital cost while computing depreciable value of the assets.

31.4 In case of existing assets, the balance depreciable value as on April 1, 2022, shall be worked out by deducting the cumulative depreciation as admitted by the Commission up to March 31, 2021, from the gross depreciable value of the assets.

31.5 The depreciation shall be chargeable from the first Year of commercial operations. In case of projected commercial operation of the assets during the Year, depreciation shall be computed based on the average of opening and closing value of assets:

Provided that depreciation shall be re-calculated during truing-up for assets capitalised at the time of truing up of each Year of the Control Period, based on documentary evidence of asset capitalised by the Applicant, subject to the prudence check of the Commission.

31.6 For Transmission Licensee, the depreciation shall be calculated at rates and norms specified in the prevalent CERC Tariff Regulations for transmission system.

31.7 The depreciation for a Distribution Licensee shall be calculated annually, based on the Straight Line Method, over the Useful Life of the asset at rates specified in Appendix I of these Regulations.

31.8 In addition to allowable depreciation, the Distribution Licensee shall be entitled to advance against depreciation (AAD), computed in the manner given hereunder:

AAD = Loan (raised for capital expenditure) repayment amount based on loan repayment tenure,

subject to a ceiling of 1/10th of loan amount minus depreciation as calculated on the basis of these Regulations:

Provided that advance against depreciation shall be permitted only if the cumulative repayment upto a particular Year exceeds the cumulative depreciation upto that Year:

Provided further that advance against depreciation in a Year shall be restricted to the extent of difference between cumulative repayment and cumulative depreciation upto that Year.

31.9 The Distribution Licensee shall provide the list of assets added during each Year of Control Period and list of assets completing 90% of depreciation in the Year along with Petition for annual performance review, true-up and tariff determination for ensuing Year.

31.10 The remaining depreciable value for a Distribution Licensee shall be spread over the balance useful life of the asset, on repayment of the entire loan."

The Commission has derived the weighted average rate of depreciation based on the asset wise depreciation rate prescribed in JERC MYT Regulations, 2021, provided in the following table:

Table 88: Asset-wise depreciation rate considered by the Commission for weighted average rate for 3rd MYT Control Period (%)

Description of Assets	Rate of Depreciation
Land & Land Rights	0.00%
Buildings	1.80%
Plant & Machinery	3.60%
Transformer	3.60%
Lines & Cables (HT & LT)	3.60%
Vehicles	18.00%

Description of Assets	Rate of Depreciation
Furniture & Fixtures	6.00%
Office Equipment	6.00%
IT Equipment	15.00%
Testing & Measuring Equipment	6.00%
SCADA P&M	6.00%

The opening GFA of the FY 2023-24 is considered as discussed in section5.11 of this Order. As discussed in the preceding section, GFA addition through Electricity Duty Fund, Govt. Grants and Consumer Contribution have been excluded for the computation of Depreciation. Further, depreciation for the year has been computed on average Gross Fixed Assets (GFA) after considering the net addition approved during each year. The GFA of assets that have completed 90% depreciation but still included in the GFA have not been excluded for the computation of Depreciation due to unavailability of requisite data. Accordingly, the Commission shall consider the same during the True-up of the respective years.

The following table provides the calculation of depreciation for the FY 2023-24.

Table 89: Depreciation considered by the Commission for FY 2023-24 (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Gross Fixed Assets	1493.43	1454.50	1428.34
Addition During the FY	250.24	565.41	250.24
Adjustment/Retirement during the FY	0.00	0.00	0.00
Closing Gross Fixed Assets	1743.67	2019.91	1678.58
Average Gross Fixed Assets	1618.55	1737.21	1553.46
Weighted Avg. rate of Depreciation (%)	3.82%	4.48%	3.82%
Depreciation	**61.84**	**77.75**	**59.36**

The Commission approves a depreciation of INR59.36Crorein the ARR for FY 2023-24.

5.13. Interest on Loan

Petitioner's Submission

Petitioner has considered the normative loan addition during the year. Repayment of the loan has been considered equivalent to the depreciation for the respective years in line with the JERC MYT Regulations, 2021. The interest rate has been calculated based on the one (1) Year State Bank of India (SBI) MCLR as on 1st April plus 100 basis point to project the interest on normative loans for the Control Period. Other finance charges incurred by the Petitioner shall be claimed based on actuals during true-up for the respective years.

The following table provides the normative Interest on Loan projected for the FY 2023-24 based on JERC MYT regulations, 2021 as under.

Table 90: Interest on Normative Loan submitted by the Petitioner for the FY 2023-24 (INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission
Opening Normative Loan	332.94	401.71
Add: Normative Loan during the year/GFA during the year	175.17	395.78
Less: Normative Repayment for the year	61.84	77.55

Particulars	Approved in MYT Order	Petitioner's Submission
Closing Normative Loan	**446.27**	**719.75**
Average Normative Loan	389.61	560.73
Rate of Interest	8.00%	8.00%
Interest on Normative Loan	**31.17**	**44.86**

Commission's analysis:

Regulation 29 of the JERC MYT Regulation, 2021 states the following:

"29.1 The loans arrived at in the manner indicated in Regulation 27 on the assets put to use, shall be considered as gross normative loan for calculation of interest on the loan:

Provided that interest and finance charges on capital works in progress shall be excluded:

Provided further that in case of De-capitalisation or retirement or replacement of assets, the loan capital shall be reduced to the extent of outstanding loan component of the original cost of the decapitalized or retired or replaced assets, based on documentary evidence.

29.2 The normative loan outstanding as on April 1, 2022, shall be worked out by deducting the cumulative repayment as admitted by the Commission up to March 31, 2021, from the gross normative loan.

29.3 Notwithstanding any moratorium period availed by the Transmission Licensee or the Distribution Licensee, as the case may be, the repayment of loan shall be considered from the first Year of commercial operation of the project and shall be equal to the annual depreciation allowed in accordance with Regulation 31.

29.4 The rate of interest shall be the weighted average rate of interest calculated on the basis of the actual loan portfolio at the beginning of each Year applicable to the Transmission Licensee or the Distribution Licensee:

Provided that at the time of truing up, the weighted average rate of interest calculated on the basis of the actual loan portfolio during the Year applicable to the Transmission Licensee or the Distribution Licensee shall be considered as the rate of interest after prudence check:

Provided also that if there is no actual loan for a particular Year but normative loan is still outstanding, the last available weighted average rate of interest for the actual loan shall be considered:

Provided further that if the Transmission Licensee or the Distribution Licensee does not have actual loan, then one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points shall be considered as the rate of interest for the purpose of allowing the interest on the normative loan.

29.5 The interest on loan shall be calculated on the normative average loan of the Year by applying the weighted average rate of interest:

Provided that at the time of truing up, the normative average loan of the Year shall be considered on the basis of the actual asset capitalisation approved by the Commission for the Year.

29.6 For new loans proposed for each Financial Year of the Control Period, interest rate shall be considered as lower of (i) one (1) Year State Bank of India (SBI) MCLR / any replacement thereof as notified by RBI for the time being in effect applicable for one (1) Year period, as may be applicable as on 1st April of the relevant Year plus 100 basis points, and (ii) weighted average rate of interest proposed by the Distribution Licensee.

29.7 The above interest computation shall exclude the interest on loan amount, normative or otherwise, to the extent of capital cost funded by consumer contribution, deposit work, capital subsidy or grant, carried out by Transmission Licensee or Distribution Licensee.

29.8 The finance charges incurred for obtaining loans from financial institutions for any Year shall be allowed by the Commission at the time of Truing-up, subject to prudence check.

29.9 The excess interest during construction on account of time and/or cost overrun as compared to the approved completion schedule and capital cost or on account of excess drawal of the debt funds disproportionate to the actual requirement based on Scheme completion status, shall be allowed or disallowed partly or fully on a case to case basis, after prudence check by the Commission:

Provided that where the excess interest during construction is on account of delay attributable to an agency or contractor or supplier engaged by the Transmission or Distribution Licensee, any liquidated damages recovered from such agency or contractor or supplier shall be taken into account for computation of capital cost:

Provided further that the extent of liquidated damages to be considered shall depend on the amount of excess interest during construction that has been allowed by the Commission.

29.10 The Transmission Licensee or the Distribution Licensee, as the case may be, shall make every effort to re-finance the loan as long as it results in net savings on interest and in that event the costs associated with such re-financing shall be borne by the beneficiaries and the net savings shall be shared between the equally between the beneficiaries; i.e., the Transmission Licensee and the Distribution Licensee or the Distribution Licensee and the Consumers of Distribution Licensee."

As the Petitioner only has normative loan and no actual loan i.e., no fixed assets in operation which are funded through loans, the Commission has considered the SBI 1 Year MCLR rate as on 1st April 2022, plus 100 basis points as Rate of Interest, in accordance with the JERC MYT Regulations, 2021.

The Interest on Loan has been calculated on the average loan during the year with the opening loan for FY 2023-24 considered as discussed in section 5.11 of this Order. Further, the normative loan addition during the year has been considered as per the capital structure approved in section 5.11 of this Order.

Repayment of the loan has been considered equivalent to the depreciation for the respective years as determined by the Commission in line with the JERC MYT Regulations, 2021.

The following table provides the Interest on Loan approved by the Commission for the FY 2023-24:

Table 91: Interest on Loan considered by the Commission for the FY 2023-24 (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Normative Loan	332.94	401.71	281.11
Add: Normative Loan During the year	175.17	395.78	175.17
Less: Normative Repayment= Depreciation	61.84	77.75	59.36
Closing Normative Loan	446.27	719.74	396.92
Average Normative Loan	389.61	560.73	339.01
Rate of Interest (%)	8.00%	8.00%	8.00%
Interest on Loan	**31.17**	**44.86**	**27.12**

The Commission approves the Interest on Loan as INR27.12Crorein the ARR of FY 2023-24.

5.14. Return on Equity (RoE)

Petitioner's Submission

The Petitioner has segregated the proposed average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021 i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business. Further, the opening equity for FY 2023-24 is taken as per closing normative equity for FY 2022-23.

In accordance with the Regulation 28.2 of the JERC MYT Regulations 2021, the Petitioner has considered a post-tax rate of 15.50% for the Distribution Wires Business (as per the prevalent CERC Regulations).

Further, in accordance with the Regulation 28.3 of the JERC MYT Regulations, 2021, the Petitioner has considered return on equity at the rate of 16% for the Retail Supply Business.

Table 92: Return on Equity submitted by the Petitioner for the FY 2023-24(INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission
Opening Balance of Equity	448.62	428.91
Net Additions during the Year	75.07	169.62
Closing Balance of Equity	523.70	598.53
Average Equity	486.16	513.72
Average Equity (Wires Business)	437.54	462.35
Average Equity (Retail Supply Business)	48.62	51.37
Rate of Return on Equity for Wire Business %	15.50%	15.50%
RoE Wire Business	67.82	71.66
Rate of Return on Equity for Retail Supply Business %	**16.00%**	**16.00%**
RoE on Retail Supply business	**7.78**	**8.22**
Total RoE (Wire and Retail Supply business)	**75.60**	**79.88**

Commission's analysis:

Regulation 28 of the JERC MYT Regulation, 2021 states the following:

"28.1 Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 27 for the assets put to use for the Transmission Licensee and shall be allowed in accordance with the prevalent CERC Tariff Regulations for transmission system.

28.2 The return on equity for the Distribution Wires Business shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use at post-tax rate of return on equity specified in the prevalent CERC Tariff Regulations for transmission system.

28.3 The return on equity for the Retail Supply Business shall be allowed on the equity capital determined in accordance with Regulation 27 for the assets put to use, at the rate of sixteen (16) per cent per annum.

28.4 The return on equity shall be computed on average of equity capital at the beginning and end of Year."

The Commission has segregated the approved average equity (average of opening and closing equity) into average equity for Distribution Wires Business and Retail Supply Business based on the Allocation Statement provided in the JERC MYT Regulations, 2021 i.e., 90% allocation for the Distribution Wires Business and 10% allocation for the Retail Supply Business.

The Commission has considered a post-tax rate of 15.50% for the Distribution Wires Business and a post-tax rate of 16% for the Retail Supply Business. The equity component has been determined in accordance with the

capital structure as discussed in section 5.11 of this Order. The rate of return on equity for the Distribution Wires Business shall be trued up based on the prevalent Regulations during the True-up of the respective years. The following table provides the total return on equity approved for the FY 2023-24.

Table 93: Return on Equity considered by the Commission for the FY 2023-24 (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Equity Amount	448.62	428.91	421.69
Equity Addition during year	75.07	169.62	75.07
Closing Equity Amount	523.70	598.53	496.76
Average Equity Amount	486.16	513.72	459.22
Average Equity (Wires Business)	437.54	462.35	413.30
Average Equity (Retail Supply Business)	48.62	51.37	45.92
Return on Equity for Wires Business (%)	15.50%	15.50%	15.50%
Return on Equity for Retail Supply Business (%)	16.00%	16.00%	16.00%
Return on Equity for Wires Business	67.82	71.66	64.06
Return on Equity for Retail Supply Business	7.78	8.22	7.35
Total Return on Equity	**75.60**	**79.88**	**71.41**

The Commission approves Return on Equity of INR71.41Crore for the FY 2023-24.

5.15. Interest on Security Deposits

Petitioner's Submission

The opening security deposit is considered from the closing balance of deposit arrived for FY 2023-24. Addition of consumer security deposit projected as per new consumer expected to connect during MYT control period. The interest rate considered is 4.25% based on the RBI Bank rate applicable on the 1st April of the financial year in which tariff Petition is being filed.

Table 94: Interest on Security Deposit submitted by the Petitioner for the FY 2023-24(INR Cr)

Particulars	Approved in MYT Order	Petitioner's Submission
Opening Security Deposit	92.31	112.58
Additions during the year	16.16	27.55
Less: Deposits Refunded	0.38	-
Closing Security Deposit	108.09	
Average Security Deposit	100.20	140.13
Rate of Interest (%)	4.25%	4.25%
Interest on Security Deposit	**4.26**	**5.37**
Interest on Security Deposit to be paid and claimed in ARR	**-**	**5.37**

Commission's analysis:

Regulation 29 of the JERC MYT Regulation, 2021 states the following:

"29.11 Interest shall be allowed on the amount held as security deposit held in cash from Retail Consumers at the Bank Rate as on 1st April of the Financial Year in which the Petition is filed:

Provided that at the time of truing-up, the interest on the amount of security deposit for the Year shall be considered on the basis of the actual interest paid by the Licensee during the Year, subject to prudence check by the Commission."

The Interest on security deposits has been calculated in accordance with the JERC MYT Regulations 2021, based on the average of the opening and closing consumer security deposits during the year. The rate of interest has been considered equivalent to the prevailing RBI Bank rate. Net additions during the year have been considered based on that considered by the Petitioner.

The following table provides the calculation of interest on consumer security deposits approved for the FY 2023-24:

Table 95: Interest on Consumer security considered by the Commission for the FY 2023-24 (INR Cr.)

Particular	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
Opening Security Deposit	92.31	112.58	112.57
Add: Deposits During the year	16.16	27.55	27.55
Less: Deposits refunded	0.38	0.00	0.00
Closing Security Deposit	108.09	140.13	140.12
Average Security Deposit	100.20	126.36	126.35
RBI Bank Rate (%)	4.25%	4.25%	4.25%
Interest on Security Deposit on normative basis	**4.26**	**5.37**	**5.37**

The Commission approves the Interest on Security Deposit as INR5.37Crore for the FY 2023-24.

5.16. Interest on Working Capital

Petitioner's Submission

The interest on working capital has been calculated based on the normative principles outlined in the JERC MYT Regulations, 2021.

The working capital requirement for the Control Period has been computed considering the following

- Receivable of two months of billing
- O&M Expenses of one month
- Maintenance Spares at 40% of repair and maintenance expenses for one month
- Less consumer security deposit but excluding Bank Guarantee/Fixed Deposit Receipt

The interest on working capital considered is the MCLR plus 200 basis points for SBI on 1st April 2022 plus 200 basis points i.e., 9.00% has been considered for computation of interest on working capital. The following table provides the Interest on working Capital proposed for the FY 2023-24.

Table 96: Interest on Working Capital submitted by the Petitioner for the FY 2023-24 (INR Cr)

Sr. No.	Particulars	Approved in MYT Order	Petitioner's Submission
1	O&M Expenses for 1 month	39.40	43.82
2	Maintenance Spares (@ 40% of R&M Expenses for one (1) month)	2.74	1.82
3	Receivables equivalent to two (2) months	423.12	431.96

Sr. No.	Particulars	Approved in MYT Order	Petitioner's Submission
4	Less: Power Purchase cost for one (1) month	158.40	167.83
5	Less: Amount, if any, held as security deposits	100.20	126.36
6	Total Working Capital	206.66	183.41
7	Rate of Interest	9.00%	9.00%
8	**Interest on Working Capital**	**18.60**	**16.51**

Commission's analysis:

Regulation 53 of the JERC MYT Regulation, 2021 states the following:

"64.1The Distribution Licensee shall be allowed interest on the estimated level of working capital for the Retail Supply Business for the Financial Year, computed as follows:

a) O&M Expenses for one (1) month; plus

b) Maintenance spares at 40% of repair and maintenance expenses for one (1) month; plus

c) Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff; Less

d) Power Purchase cost for one (1) month; plus

e) Amount, if any, held as security deposits under clause (b) of sub-section (1) of Section 47 of the Act from Consumers except the security deposits held in the form of Bank Guarantees:

Provided that at the time of truing up for any Year, the working capital requirement shall be recalculated on the basis of the values of components of working capital approved by the Commission in the truing up."

The Commission has computed the Interest on Working Capital for each year of the Control Period in accordance with the JERC MYT Regulations, 2021. The interest rate has been considered as 9.00% (1 year MCLR as on 1st April 2022 i.e., 7.00% + 200 basis points). The computation of interest on working capital is shown in the following table:

The following table provides the Interest on working Capital considered for the FY 2023-24.

Table 97: Interest on working capital considered by the Commission for the FY 2023-24 (INR Cr.)

Particulars	Approved in MYT Order	Petitioner's Submission	Approved by the Commission
O&M Expense for 1 month	39.40	43.82	44.15
Maintenance spares at 40% of R&M expenses for one (1) month;	2.74	1.82	1.63
Receivables equivalent to two (2) months of the expected revenue from Consumers at the prevailing tariff	423.12	431.96	383.86
Less: Power Purchase cost for one (1) month	158.40	167.83	168.97
Less: Amount held as security deposits	100.20	126.36	126.35
Net Working Capital	**206.66**	**183.41**	**134.33**
Rate of Interest (%)	9.00%	9.00%	9.00%
Interest on Working Capital	**18.60**	**16.51**	**12.09**

The Commission approves the Interest on Working Capital as INR 12.09 crore in the ARR of FY 2023-24.

5.17. Income Tax

Petitioner's Submission

The Petitioner has not made any submission in this regard.

Commission's analysis:

Regulation 33 of JERC MYT Regulations, 2021 stipulates the following:

"33. Tax on Income

33.1 The treatment of tax on income for a Transmission Licensee shall be in accordance with the prevalent CERC Tariff Regulations.

33.2 The Commission in its MYT Order shall provisionally approve Income Tax payable for each Year of the Control Period, if any, based on the actual income tax paid, including cess and surcharge on the same, if any, as per latest audited accounts available for the Distribution Licensee, subject to prudence check.

33.3 Variation between Income Tax actually paid, including cess and surcharge on the same, if any, and approved, if any, on the income stream of the Licensed business of the Distribution Licensees shall be reimbursed to/recovered from the Distribution Licensees, based on the documentary evidence submitted at the time of truing up of each Year of the Control Period, subject to prudence check.

33.4 Under-recovery or over-recovery of any amount from the Consumers on account of such tax having been passed on to them shall be adjusted every Year on the basis of income-tax assessment under the Income-Tax Act, 1961, as certified by the statutory auditors. The Distribution Licensee may include this variation in its truing up Petition:

Provided that tax on any income stream other than the core business shall not be a pass-through component in tariff and tax on such other income shall be borne by the Distribution Licensee."

Since the Petitioner has paid no Income tax in the previous years, no income tax liability is computed for the FY 2023-24 and the same shall be Trued-up based on the actual income tax paid by the Petitioner.

5.18. Provision for Bad & Doubtful Debts

Petitioner's Submission

The Petitioner has not proposed any provision for bad and doubtful debts during the MYT Control Period.

Commission's analysis

Regulation 63 of the JERC MYT Regulation, 2021 states the following:

"63.1 The Commission may allow bad debts written off as a pass through in the Aggregate Revenue Requirement, based on the trend of bad debts written off in the previous years, subject to prudence check:

Provided that the Commission shall true up the bad debts written off in the Aggregate Revenue Requirement, based on the actual write off of bad debts excluding delayed payment charges waived off, if any, during the year, subject to prudence check:

Provided also that the provision for bad and doubtful debts shall be limited to 1% of the annual Revenue Requirement of the Distribution Licensee:

Provided further that if subsequent to the write off of a particular bad debt, revenue is realized from such bad debt, the same shall be included as an uncontrollable item under the Non-Tariff Income of the year in which such revenue is realised."

The Commission also has not considered any Provision for Bad & Doubtful Debts for the FY 2023-24 and the same shall be accounted for as per actuals during the True-up of respective years.

5.19. Non-Tariff Income (NTI)

Petitioner's Submission

The Petitioner has projected the Non-Tariff Income as INR 29.93 crore for the FY 2023-24 as against the approved Non-Tariff Income of INR 29.20 crore in the MYT Order.

Commission's analysis:

Regulation 65 of the JERC MYT Regulations, 2021 stipulates the following:

"65. Non-Tariff Income

65.1 The amount of Non-Tariff Income relating to the retail supply of electricity as approved by the Commission shall be deducted from the Aggregate Revenue Requirement in calculating the tariff for retail supply of electricity by the Distribution Licensee:

Provided that the Distribution Licensee shall submit full details of its forecast of Non-Tariff Income to the Commission along with its application for determination of tariff.

65.2 The Non-Tariff Income shall inter-alia include:
(a) Income from rent of land or buildings;
(b) Income from sale of scrap;
(c) Income from statutory investments;
(d) Interest on advances to suppliers/contractors;
(e) Rental from staff quarters;
(f) Rental from contractors;
(g) Income from hire charges from contactors and others;
(h) Income from advertisements, etc.;
(i) Meter/metering equipment/service line rentals;
(j) Service charges;
(k) Consumer charges;
(l) Recovery for theft and pilferage of energy;
(m) Rebate availed on account of timely payment of bills;
(n) Miscellaneous receipts;
(o) Deferred Income from grant, subsidy, etc., as per Annual Accounts;
(p) Prior period income, etc.:

Provided that the interest/dividend earned from investments made out of Return on Equity corresponding to the Retail Supply Business of the Distribution Licensee shall not be included in Non-Tariff Income:

Provided further that any income earned by a Distribution Licensee by sale of power to other Distribution Licensees or to Consumers as per Section 49 of the Act using the existing power purchase agreements or bulk

supply capacity allocated to the Distribution Licensee's Area of Supply shall be reduced from the Aggregate Revenue Requirement of the Distribution Licensee for the purpose of determination of tariff. Such reduction shall be carried out in accordance with Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017, as amended from time to time."

The Commission considers the same NTI as projected by the Petitioner. The same shall be Trued-up on actual basis. Further, the Commission has computed the rebate on power purchase @1% in Section 5.7.5 and the same has been considered as part of NTI. Therefore, the NTI approved for the FY 2023-24 has been shown in the following table:

Table 98: Non-Tariff Income considered by the Commission for the FY 2023-24 (INR Cr.)

Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
Non-Tariff Income	26.32	29.93	29.93
Rebate on Power Purchase	-	-	20.28
Total Non-Tariff Income	**26.32**	**29.93**	**50.21**

The Commission approves the Non-Tariff Income of INR 50.21 Crore in the ARR of FY 2023-24.

5.20. Aggregate Revenue Requirement (ARR)

Petitioner's Submission

Based on the expenses as detailed above, the Petitioner submitted the net aggregate revenue requirement for the FY 2023-24 as shown in the following table:

Table 99: ARR submitted by the Petitioner for the FY 2023-24 (INR Cr.)

S. No.	Particulars	Approved in MYT Order	Petitioner's Submission
1	Power Purchase Cost	1,900.80	2,013.94
2	Operation & Maintenance Expenses	472.78	525.87
3	Depreciation	61.84	77.75
4	Interest and Finance charges	31.17	44.86
5	Interest on Working Capital	18.60	16.51
6	Return on Equity	75.60	79.88
7	Interest on Security Deposit	4.26	5.37
8	**Total Revenue Requirement**	**2,565.05**	**2,764.18**
9	Less: Non-Tariff Income	29.20	29.93
10	**Net Revenue Requirement**	**2,535.85**	**2,734.25**

Commission's Analysis:

On the basis of the detailed analysis of the cost parameters of the ARR the net revenue requirement for the FY 2023-24 is approved as provided in the following table:

Table 100: ARR approved by the Commission for the FY 2023-24 (INR Cr.)

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
1	Power Purchase Cost	1,900.80	2,013.94	2,027.60

S. No	Particulars	Approved in MYT Order	Petitioner's Submission	Now Approved by Commission
2	O&M Expenses	472.78	525.87	529.79
3	Depreciation	61.84	77.75	59.36
4	Interest and Finance charges	31.17	44.86	27.12
5	Interest on Working Capital	18.60	16.51	12.09
6	Return on Equity	75.60	79.88	71.41
7	Interest on Security Deposit	4.26	5.37	5.37
8	**Total Revenue Requirement**	**2,565.05**	**2,764.18**	**2,732.74**
9	Less: Non-Tariff Income	26.32	29.93	50.21
10	**Net Revenue Requirement**	**2,538.73**	**2,734.25**	**2,682.53**

The Commission approves the net revenue requirement of INR 2682.53 crore in the ARR of FY 2023-24.

5.21. Revenue at existing Retail Tariff

Petitioner's Submission

The Revenue from sale of power at existing Tariff based on the projected sales, consumer and connected load for FY 2023-24 is tabulated below:

Table 101: Revenue at existing tariff submitted by the Petitioner for FY 2023-24 (INR Cr.)

Sr. No.	Category	Sales in MU	Revenue from Fixed Charges	Revenue from Energy Charges	Total	Average Billing Rate (Rs/kWh)
1	**Domestic**	**1386.73**	**45.21**	**372.34**	**417.56**	**3.01**
(i)	LT-D Domestic	**1385.41**	**45.16**	**372.16**	**417.32**	**3.01**
	0-100 units	501.44	13.78	80.23	94.01	**1.87**
	101-200 units	326.50	9.94	76.73	86.67	**2.65**
	201-300 units	187.54	7.80	55.32	63.12	**3.37**
	301-400 units	109.83	4.67	42.83	47.50	**4.33**
	Above 400 units	260.09	8.96	117.04	126.00	**4.84**
(ii)	Low Income Group	0.93	0.00	-	0.00	**0.02**
(iii)	HT-D Domestic	0.39	0.05	0.19	0.24	**6.16**
2	**Commercial**	**682.75**	**62.86**	**338.22**	**401.08**	**5.87**
(i)	LT-C Commercial	**511.86**	**23.53**	**247.40**	**270.93**	**5.29**
	0-100 units	82.09	6.62	29.14	35.76	**4.36**
	101-200 units	52.03	2.07	22.63	24.70	**4.75**
	201-400 units	67.12	2.64	32.55	35.20	**5.24**
	Above 400 units	310.61	12.21	163.07	175.28	**5.64**
(ii)	**HT-C Commercial**	**170.89**	**39.33**	**90.82**	**130.15**	**7.62**

Sr. No.	Category	Sales in MU	Revenue from Fixed Charges	Revenue from Energy Charges	Total	Average Billing Rate (Rs/kWh)
3	**Industrial**	**2349.52**	**226.46**	**1136.74**	**1363.20**	**5.80**
(i)	LT-I Industrial	**93.79**	**9.39**	**36.08**	**45.47**	**4.85**
	0-500 units	17.63	4.33	5.99	10.33	**5.86**
	Above 500 units	76.17	5.06	30.09	35.14	**4.61**
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	4.16	0.15	2.19	2.34	**5.62**
(iii)	High Tension-I/HT-I	**1738.62**	**181.97**	**851.27**	**1033.24**	**5.94**
	Connected at 11/33 kV	1485.28	156.38	731.97	888.35	**5.98**
	Connected at 110 kV	253.34	25.59	119.30	144.89	**5.72**
(iv)	High Tension-Ferro/SM/PI/SR	512.94	34.95	247.20	282.15	**5.50**
4	**Agriculture**	**41.95**	**2.38**	**7.31**	**9.69**	**2.31**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	19.05	1.37	2.86	4.23	**2.22**
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	1.48	0.10	0.26	0.36	**2.40**
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	6.51	0.64	1.29	1.93	**2.97**
(iv)	High Tension-AG/HT-AG (Allied Activities)	14.90	0.27	2.90	3.17	**2.13**
5	**Military Engineering Services/ defense Establishments**	**33.43**	**2.21**	**17.20**	**19.41**	**5.81**
6	**Public Lighting**	**50.09**	**0.85**	**28.30**	**29.14**	**5.82**
7	**Hoardings/Signboards**	**0.34**	**0.05**	**0.34**	**0.39**	**11.41**
8	**Temporary**	**10.42**	**0.46**	**5.79**	**6.26**	**6.01**
(i)	**LT**	**4.09**	**0.46**	**0.25**	**0.72**	**1.75**
	LT Domestic	1.06	0.07	0.25	0.33	
	LT Commercial	3.03	0.39	0.00	0.39	**1.28**
(ii)	**HT**	**6.33**	**0.00**	**5.54**	**5.54**	**8.75**
9	**Single Point Supply**	**6.68**	**0.66**	**3.21**	**3.87**	**5.79**
(i)	*Residential Complexes*	0.00	0.00	0.00	0.00	
(ii)	*Commercial Complexes*	6.68	0.66	3.21	3.87	**5.79**
(iii)	*Industrial Complexes*	0.00	0.00	0.00	0.00	
	TOTAL	**4561.91**	**341.14**	**1909.46**	**2250.60**	**4.93**

Commission's analysis

The category wise/ sub-category wise and slab-wise revenue at existing retail tariff is calculated as per the applicable tariff rates. The revenue from demand charges and the energy charges have been projected for each category/ sub-category and slab. The Commission has considered suitable assumptions wherever necessary. The revenue at existing tariff as computed by the Commission for the FY 2023-24 has been shown in the following table:

Table 102: Revenue at existing tariff approved by the Commission for FY 2023-24 (INR Cr.)

Sl. No.	Category	Sales (MU)	Revenue from fixed Charges (Rs Cr.)	Revenue from energy charges (Rs Cr.)	Total (Rs. Cr.)
1	**DOMESTIC**	**1469.35**	**46.46**	**383.20**	**429.66**
(i)	LT-D Domestic	1468.06	46.41	383.02	429.43
	0-100 units	564.39	14.17	90.30	104.47
	101-200 units	358.16	10.22	84.17	94.39
	201-300 units	196.18	8.02	57.87	65.89
	301-400 units	108.71	4.80	42.40	47.19
	Above 400 units	240.62	9.21	108.28	117.49
(ii)	Low Income Group	0.93	0.00	-	0.00
(iii)	HT-D Domestic	0.37	0.05	0.18	0.22
2	**COMMERCIAL**	**629.00**	**50.40**	**311.43**	**361.83**
(i)	LT-C Commercial	474.02	24.36	227.11	251.47
	0-100 units	85.68	6.79	30.43	37.21
	101-200 units	51.35	2.15	22.35	24.50
	201-400 units	63.74	2.75	30.93	33.68
	Above 400 units	273.06	12.67	143.41	156.09
(ii)	HT-C Commercial	154.98	26.04	84.31	110.35
3	**INDUSTRIAL**	**2341.91**	**193.15**	**1140.27**	**1333.42**
(i)	LT-I Industrial	86.77	5.65	33.35	39.00
	0-500 units	16.91	2.61	5.75	8.36
	Above 500 units	69.86	3.04	27.59	30.64
(ii)	Low Tension-Mixed/LT-P (Hotel Industries)	3.90	0.14	2.05	2.19
(iii)	High Tension-I/HT-I	1756.68	156.34	866.31	1022.64
	Connected at 11/33 kV	1467.02	133.76	729.52	863.28
	Connected at 110 kV	289.66	22.58	136.78	159.36
(iv)	High Tension-Ferro/SM/PI/SR	494.55	31.03	238.57	269.60
4	**AGRICULTURE**	**35.47**	**1.35**	**6.64**	**7.99**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	14.22	0.81	2.13	2.94
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.65	0.04	0.11	0.15
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	6.48	0.39	1.62	2.01
(iv)	High Tension-AG/HT-AG (Allied Activities)	14.12	0.11	2.77	2.88
5	**Military Engineering Services/defense Establishments**	**33.55**	**1.65**	**16.78**	**18.43**
6	**PUBLIC LIGHTING**	**46.27**	**0.92**	**26.14**	**27.06**

Sl. No.	Category	Sales (MU)	Revenue from fixed Charges (Rs Cr.)	Revenue from energy charges (Rs Cr.)	Total (Rs. Cr.)
7	**HOARDINGS/SIGNBOARDS**	**0.27**	**0.04**	**0.27**	**0.30**
8	**TEMPORARY**	**8.80**	**0.00**	**7.70**	**7.70**
(i)	**LT**	3.60	0.00	3.01	3.01
	LT Domestic	0.25	0.00	0.11	0.11
	LT Commercial	3.35	0.00	2.90	2.90
(ii)	HT	5.20	0.00	4.69	4.69
9	**Single Point Supply**	**5.38**	**0.56**	**2.67**	**3.23**
(i)	Residential Complexes	0.00	0.00	0.00	0.00
(ii)	Commercial Complexes	5.38	0.56	2.67	3.23
(iii)	Industrial Complexes	0.00	0.00	0.00	0.00
	TOTAL	**4570.01**	**294.53**	**1895.08**	**2189.60**

The Commission has determined revenue from sale of power at existing tariff as INR2189.60Cr.for the FY 2023-24.

5.22. Standalone Revenue Gap/Surplus for FY 2023-24

Petitioner's Submission

Based on the ARR and the revenue from retail tariff projected by the Petitioner, the Petitioner has submitted a standalone revenue gap of INR 483.65 Cr for the FY 2023-24.

Commission's analysis

Based on the approved ARR and existing retail tariff, the following Revenue Gap/Surplus is arrived at for the FY 2023-24:

Table 103: Standalone Revenue Gap/ (Surplus) at existing tariff approved by Commission for FY 2023-24 (In INR Cr)

S. No	Particulars	Petitioners' Submission	Now Approved
1	Net Revenue Requirement	2,734.25	2,682.53
2	Revenue from Retail Sales at Existing Tariff	2,250.60	2,189.60
	Net Gap /(Surplus)	**483.65**	**492.93**

The standalone gap at existing retail tariff is INR492.93 Crore for FY 2023-24. This estimated gap is considered while determining the retail tariff for FY 2023-24, as discussed in the subsequent Chapter.

6. Chapter 6: Tariff Principles and Design

6.1. Overall Approach

The Commission while designing retail tariffs for the FY 2022-23 has kept in view the principles of determination of tariff as set out in the Electricity Act, 2003 (EA 2003), Tariff Policy, 2016 and the JERC MYT Regulations, 2021.

The provision of supply of electricity to all the people is an essential driver for development, and also influences social and economic change. In this Tariff Order, the Commission has continued with its endeavor to meet the objectives of the EA 2003, as set out in its Preamble, including the protection of the interest of consumers, the supply of electricity to all areas and the rationalisation of tariffs. The EA, 2003 also mandates the Commission to strike a fine balance between the interests of various stakeholders including Utilities and consumers. The Commission has also taken into consideration the Petitioner's submissions as well as the public responses in these proceedings.

6.2. Applicable Regulations

Regulation 20 of the JERC MYT Regulations, 2021 states the following:

"***20. Annual determination of tariff***

20.1 The Commission shall determine the tariff of a Generating Company, Transmission Licensee and Distribution Licensee covered under a Multi Year Tariff framework for each Year during the Control Period, in accordance with timelines specified in Regulation 18, having regard to the following:

a) The approved forecast of Aggregate Revenue Requirement and Expected Revenue from Tariff and Charges of the Generating Company, Transmission Licensee and Distribution Licensee for such Financial Year, including modifications approved at the time of Mid-term Review, if any; and

b) Approved gains and losses, including the incentive available, to be passed through in tariff, following the truing up of previous Year."

Further, Regulation 68 of the JERC MYT Regulations, 2021 states the following:

"68. Determination of Tariff

68.1 The Commission may categorize Consumers on the basis of their load factor, power factor, voltage, total consumption of electricity during any specified period or the time at which the supply is required or the geographical position of any area, the nature of supply and the purpose for which the supply is required and any other factor as considered appropriate by the Commission.

68.2 The Commission shall endeavour to determine cost of supply for each category/ sub-category of Consumers.

68.3 The Commission shall endeavour to reduce gradually the cross-subsidy between Consumer categories with respect to the cost of supply in accordance with the provisions of the Act.

68.4 The tariff proposal by Licensee and the tariff determination by the Commission shall be based on the following principles:

(a) The tariff for all categories shall preferably be two part, consisting of fixed and variable charges.

6.3. Standalone and Consolidated Revenue Gap/ Surplus at existing tariff

Petitioner's Submission

The Petitioner has proposed a standalone revenue gap at existing tarifffor FY 2023-24 as shown in the table below. Further, the Petitioner has proposed that the gap of FY 2023-24 is proposed to be bridged partially through tariff hike and remaining through budgetary support. Further, the revenue gap may be provisionally recognized by the Hon'ble Commission and due treatment be given for recovery at a later date when petition for True-ups are filed based on actual accounts / figures of revenue gap. However, revenue gap on account of True-ups of FY 2020-21 & FY 2021-22 will not be passed over to the Consumers of EDG on account of Budgetary Support letters issued by Government of Goa from time to time.

Table 104: Standalone Revenue Gap/ (Surplus) submitted by Petitioner for FY 2023-24 (In Rs Cr)

Particulars	FY 2023-24
Net Revenue Requirement	2,734.25
Revenue from Retail Sales at Existing Tariff	2,250.60
Standalone Gap /(Surplus) for the year	**483.65**

Commission's analysis

The Commission in the True-up of FY 2017-18 to FY 2019-20had approved the revenue gap/surplus. Further, the Commission has not approved any revenue gap for the FY 2020-21and FY 2021-22 due to non–availability of audited annual accounts. The Commission has determined the tariff for FY 2023-24 as part of this Order. Therefore, the Commission approves the standalone revenue gap for FY 2023-24 as follows:

Table 105: Standalone Revenue Gap/ (Surplus) at existing tariff approved by Commission for FY 2023-24 (In INR Cr)

S. No	Particulars	Now Approved
1	Net Revenue Requirement	2,682.53
2	Revenue from Retail Sales at Existing Tariff	2,189.60
3	**Net Gap /(Surplus)**	**492.93**

The Commission has computed a standalone revenue gap of INR 492.93 Crore in the FY 2023-24 at the existing tariff.

6.4. Treatment of the Revenue Gap/ Surplus and Tariff Design

The revenue gap of INR 492.93Crore typically signifies that the revenue from the existing tariff is not commensurate with the costs incurred by the Petitioner. In order to cover this revenue deficit and to be financially sustainable, the retail consumer tariffs demand a tariff increase. However, the revenue gap being substantial, recovering this entirely from increase in consumer tariffs may lead to a tariff shock. The Commission has accordingly dealt with this issue in the following section.

6.4.1. Tariff Design

Petitioner's Submission

The Petitioner has proposed that the gap of FY 2023-24 is proposed to be bridged partially through tariff hike and remaining through budgetary support. Further, the revenue gap may be provisionally recognized by the

Hon'ble Commission and due treatment be given for recovery at a later date when petition for True-ups are filed based on actual accounts/figures of revenue gap. However, revenue gap on account of True-ups of FY 2020-21 & FY 2021-22 will not be passed over to the Consumers of EDG on account of Budgetary Support letters issued by Government of Goa from time to time. However, for the Category of HT Military Engineering Services/ Defense Establishment, EDG proposes no tariff hike in view of letter from Hon'ble Defense Minister of India addressed to Hon'ble Chief Minister of Goa requesting to propose tariff slab for Armed Forces at par or lower than that applicable to the domestic consumers. The Petitioner has proposed the tariff schedule as follows:

Table 106: Tariff Schedule proposed by the Petitioner for FY 2023-24

S. No.	Category	Proposed Tariff for FY 2023-24		
		Fixed Charges	Energy Charges (INR/kWh)	
			Units	Rate
1	**Domestic**			
A	**Low Tension-D/LT-D**			
	0-100 units	INR 22/kW/Month	Rs/kWh	1.75
	101-200 units		Rs/kWh	2.60
	201 to 300 units		Rs/kWh	3.30
	301 to 400 units		Rs/kWh	4.40
	Above 400 units		Rs/kWh	5.10
B	**Low Tension-LIG/LT-LIG**			
	All Units	INR 22/kW/Month	Rs/kWh	-
C	**High Tension-D/HT-D**			
	All Units	INR 125/kVA/Month	Rs/kVAh	5.30
2	**Commercial**			
A	**Low Tension-C/LT-C**			
	0-100 units	**For consumers with Load upto 20 kW** INR 45/kW/Month **For consumers with Load more than 20 kW and upto 90 kW** INR 70/kW/Month	Rs/kWh	4.00
	101-200 units		Rs/kWh	4.85
	201 units- 400 units		Rs/kWh	5.50
	Above 400 units		Rs/kWh	6.00
B	**High Tension-C/HT-C**			
	All Units	INR 285/kVA/month	Rs/kVAh	6.00
3	**Industrial**			
A	**Low Tension-I/LT-I**			
	0-500 units	INR 35/HP/Month	Rs/kWh	3.50
	Above 500 units	INR 35/HP/Month	Rs/kWh	4.05
B	**Low Tension-Mixed/LT-P (Hotel Industries)**			
	All Units	INR 55/kW/Month	Rs/kWh	5.60
C	**High Tension-I/HT-I**			
	Connected at 11/33 kV	INR 255/kVA/Month	Rs/kVAh	4.90
	Connected at 110 kV	INR 255/kVA/Month	Rs/kVAh	4.80
D	**High Tension- Ferro/SM/ PI/ SR**			
	All Units	INR 255/kVA/Month	Rs/kVAh	4.90
4	**Agricultural**			
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**			
	All Units	INR 20/HP/Month	Rs/kWh	1.60
B	**Low Tension-AG/LT-AGA (Allied Activities)**			
	All Units	INR 27/HP/Month	Rs/kWh	2.20
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**			
	All Units	INR 42/kVA/Month	Rs/kVAh	1.70
D	**High Tension-AG/HT-AG (Allied Activities)**			

S. No.	Category	Proposed Tariff for FY 2023-24		
		Fixed Charges	Energy Charges (INR/kWh)	
			Units	Rate
	All Units	INR 77/kVA/Month	Rs/kVAh	2.15
5	**Military Engineering Services/ defense Establishments**			
	All Units	INR 200/kVA/Month	Rs/kVAh	4.90
6	**Public Lighting**			
	All Units	INR 72/kW/Month	Rs/kWh	5.80
7	**Hoardings/Signboards**			
	All Units	INR 77/kVA/Month	Rs/kWh	11.00
8	**Temporary Supply**			
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.		
B	LT Temporary Commercial			
C	HT Temporary			
9	**Single Point Supply**			
A	Residential Complexes	INR 120 per kVA per month or part thereof	Rs/kVAh	3.90
B	Commercial Complexes	INR 240 per kVA per month or part thereof	Rs/kVAh	5.30
C	Industrial Complexes	INR 240 per kVA per month or part thereof	Rs/kVAh	4.90
10	**Electric Vehicle Charging Station**			
	All Units	-	Rs/kVAh	3.70

Commission's analysis

The Commission has determined the retail tariff for the FY 2023-24 in accordance with the principles stated in the Electricity Act, 2003 Tariff Policy, 2016, and the JERC MYT Regulations, 2021. The Tariff design in general is guided by the following principles:

1. Cost reflective: The tariffs determined should efficiently reflect the cost of supply for each consumer category.
2. Progressive tariffs: Ensuring progressivity among tariffs by having telescopic tariff slabs which encourages efficient consumption and at the same time allows intra-category cross-subsidy by way of charging higher tariff for higher consumption to subsidise the lower consumption consumers
3. Revenue neutrality: There should be no impact on the utility's yearly revenue due to rationalization of tariffs i.e. the overall status quo should be maintained.
4. Affordability: Assessing affordability of electricity for Domestic and Commercial consumers for defining slab ranges and setting tariffs
5. Revenue stability: Tariff should ensure adequate fixed cost recovery for utilities from fixed/demand charges
6. Avoiding tariff shocks: Tariff shocks should be avoided and stakeholders should be able to predict the future trends in tariffs

7. Demand management and grid stability: Demand management and grid stability should be ensured with demand-based tariffs

8. Simplified tariff structure: Tariff structure should be simplified to make it easily administrable by the utility and easy to understand for the consumer.

9. Smart tariff design: Tariff rate design should take into consideration trends in electric power such as small-scale renewable generation by consumers, energy efficiency, electric vehicle charging, etc.

While all the above parameters contribute significantly to developing a sustainable tariff framework, there are certain parameters namely Cost of Supply and Tariff Affordability which are of importance and constitute the building blocks in achieving the overall objective. The context and the approach for these parameters have been discussed as follows:

Cost of Supply

a) Context

Due to electricity being a crucial utility item for all consumers, over the period of time, various socio-economic issues have been factored in to determine the end user's tariffs. This has unfortunately led to severe imbalance between the tariffs levied vis-a-vis the cost of supply of the electricity, causing distress to the Distribution Licensee. For example, in order to ensure that tariffs are kept in check for domestic consumers, while still allowing cost recovery for Distribution Licensees, cross subsidy has been built in between categories. The tariffs so determined, are skewed, with tariff for industrial and commercial consumers being higher and for other categories being lower than their respective costs of supply. The implications of this imbalance in tariffs is twofold – uncompetitive industries owing to higher input costs and inability of Distribution Licensees to recover sufficient tariffs from domestic consumers, resulting in financial distress. The issue is more pronounced for rural supply where tariffs are highly subsidized, actual cost of supply is higher and revenue recovery is poor.

It is thus essential that tariffs reflect the true cost to service a category of consumer. As a crucial first step towards cost-reflective tariffs, it is important for Distribution Licensees to determine the costs of supply (which cascade from generation to transmission and finally to distribution and retail supply of power) that should be prudently recovered from each consumer category. These costs should correspond to the actual costs being caused/contributed by each consumer category towards total cost incurred by the Distribution Licensee. By determining consumer category wise costs of supply, the Distribution Licensee would be in a better position to allocate costs where relevant and determine how tariffs can be levied fairly on each category.

b) Approach

The overall approach that can be followed for accurately determining the Cost of Supply has been discussed as follows.

Presently, the most commonly used approach for determining the cost of supply of electricity for tariff determination is the Average Cost of Supply (ACoS) method. The ACoS is computed by dividing the Annual Revenue Requirement (ARR) determined by the Commission for recovery through tariffs by the total energy sales for the year. However, this methodology doesn't indicate the costs incurred by consumers at different voltage levels using different assets of the network. Therefore, it doesn't help in determining accurate tariffs for particular consumers, eventually resulting in insufficient cost coverage.

As a next logical step, the Voltage wise cost of supply (VCoS) method provides a better reflection of cost to supply to consumers at different voltage levels.

VCoS uses three parameters for allocating various costs to voltage levels – energy input at each voltage level, energy sales and asset allocation to voltage levels. The losses segregated voltage wise (as percentage of input energy) are to be allocated to different voltage levels based on energy input to each voltage level (as explained in subsequent sections). Subsequently, the cost elements such as power procurement costs, employee expenses, administrative and general expenses and income tax can be allocated to each voltage levels based on total sales at each voltage level. The cost elements, which are dependent on assets such as depreciation,

interest costs, return allowed to utility etc. are allocated in ratio of assets allocated to each voltage level. The sum of all the cost components at each voltage level is the cost to supply the particular voltage (EHT/HT/LT).

The Commission is of the opinion that while VCoS differentiates cost allocation based on voltage levels, it does not factor in consumer category level differentiation. For instance, at the same LT level, cost of supplying electricity to a Commercial consumer may be different from that of a domestic consumer. Thus, it believes that the most progressive way forward for the Distribution Licensee is to accurately determine the cost of supply is to attempt to determine Cost of Supply for various consumer categories and also voltage level. The Commission notes that States like Andhra Pradesh and Telangana have determined Category wise Cost of Supply albeit with several assumptions and the Distribution Licensee must also attempt to determine the same.

The Commission is of the opinion that for determination of the Category wise Cost of Supply, the embedded cost methodology is an appropriate starting point.

The Commission strongly believes that determination of Category wise Cost of Supply is essential to ensure cost reflectivity in tariffs fixed for different categories. However, the Commission feels that to carry out this exercise a lot of field level information would be required such as Category wise co-incident and non- co-incident demand, Voltage wise value of assets (Voltage wise asset ratio), Voltage wise losses, Category wise break-up of costs related to Metering, Billing and Collection etc. which currently the Petitioner doesn't maintain. Therefore, in absence of the same, the Commission is unable to determine the Category wise Cost of Supply in this Order but directs the Petitioner to start maintaining this data and submit the same in the tariff proceedings of next year. In absence of the requisite data for determination of voltage-wise/category-wise cost of supply as mentioned above, the Commission as part of this Tariff Order has determined the tariff according to the Average Cost of Supply (ACoS).

Tariff Affordability

a) Context

The Commission understands that the consumer base of Distribution Licensee is varied and covers a wide spectrum of socio-economic backgrounds, specially the domestic category consumers. It is also aware that most low-income households spend a substantial share of their income on utility services such as electricity, heating and water. However, any envisaged tariff reforms are often objected to avoid further burdening of these consumers. But to improve the quality of service of electricity, the Distribution Licensee has to undertake significant capital expenditure which eventually deteriorates the affordability of tariffs. Thus, to tackle this problem and in the spirit of economic well being of all consumer classes, the concept of cross-subsidies has been built into the current tariff structure.

However, the Commission believes that a more scientific and logical approach can be adopted to identify the right categories of consumers and the right cross-subsidy/subsidy requirement that will benefit the end consumers at the same time. Hence, the Commission believes that there is a strong need to develop a scientific methodology to assess the social impact of electricity tariffs.

The overall approach that can be followed for determining the tariff affordability has been discussed as follows.

b) Approach

On reviewing methodologies adopted for social impact assessment of electricity tariffs, the Commission found that Tariff Affordability Ratio (TAR) is a reliable parameter to measure affordability of electricity in households.

TAR is defined by obtaining the burden incurred by a household for electricity as compared to the overall household expenditure. The rationale behind this concept is that the electricity is basic utility and is unavoidable in today's scenario, however, this does not ensure that the expenditure level is in line with the overall household expenditure. Hence, this concept helps to understand the affordability level of electricity on households with different economic levels.

The electricity expenditure can be determined initially for domestic consumers by computing the average consumption levels across each slab and the household expenditure can be estimated from national surveys of household expenditure across economic levels conducted by organizations like NSSO. Thereafter the distribution of consumers of the Distribution Licensee across tariff slabs can be mapped across the established economic levels to develop the final affordability ratio matrix for the Distribution Licensee's domestic consumer base.

Following the identification of the current ratio of Tariff Affordability, the Commission in consultation with the stakeholders will develop benchmarks for acceptable affordability levels by studying trends across countries with a demography and energy scenario similar to that of India and propose appropriate tariffs. The final output shall help understand the Commission to modify tariffs in cases where there is more room for tariff increase or a need to correct tariffs. The exercise would also help the Commission in setting tariff slabs as per the paying capacity of the consumers which would be beneficial especially for Domestic category consumers. Additionally, this shall also help the Government to formulate better schemes to effectively channelize its intended benefits.

The Commission in these tariff proceedings is not carrying out this exercise due to unavailability of accurate data. The Petitioner is directed to ensure the sanctity of the data maintained pertaining to various categories.

Based on the discussions above, the Commission is continuing with its existing approach of determination of tariff for various consumer categories based on the Average Cost of Supply (ACoS) and reduction of Cross Subsidy amongst various consumer categories, ensuring consumer tariffs progressively moving towards the cost.

Cross Subsidy

As per Section 61 (g) of the Electricity Act 2003

*"(g) that the **tariff progressively reflects the cost of supply** of electricity and also, **reduces and eliminates cross-subsidies** within the period to be specified by the Appropriate Commission;"*

For reduction of cross subsidies, the Tariff Policy 2016 in Section 8.3 stipulates as below:

*"For achieving the objective that the tariff progressively reflects the cost of supply of electricity, the Appropriate Commission would notify a roadmap such that tariffs are brought **within ±20% of the average cost of supply**. The road map would also have intermediate milestones, based on the approach of a gradual reduction in cross subsidy."*

In order to achieve the objectives of the Tariff Policy 2016 of bringing down the cross subsidy levels amongst various consumer categories within ±20% of the average cost of supply, the Commission has tried to rationalize the tariff applicable to various consumer categories.

The limit of cross subsidy, as envisaged in the Tariff Policy 2016, can't be achieved by rationalizing the tariff in a single year, as this may lead to tariff shock to the cross subsidized consumers. In this Tariff Order, the Commission has continued its approach of rationalization of the tariff for various consumer categories and reducing the cross subsidy.

Accordingly, in this Tariff Order, the Commission has designed tariff for various consumer categories considering the Average Cost of supply in line with the provisions of the Tariff Policy, 2016. While designing the tariff for FY 2023-24, the Commission has reduced the cross-subsidy levels with an endeavored to bring the same within range specified in Tariff Policy 2016. To achieve this objective, the Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and either reduced/maintained the tariff levels or increased tariff at lower than average tariff hike for cross-subsidizing categories.

6.4.2. Approved Final Tariff Schedule

The existing retail tariff and tariff now approved by the Commission for each consumer category has been shown in the table below:

Table 107: Existing and approved tariff

	Category	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
1	**Domestic**				
A	**Low Tension-D/LT-D**				
	0-100 units	INR 20/kW/Month	1.60 Rs/kWh	INR 20/kW/Month or part thereof	1.75 Rs/kWh
	101-200 units	INR 20/kW/Month	2.35 Rs/kWh	INR 20/kW/Month or part thereof	2.60 Rs/kWh
	201 to 300 units	INR 20/kW/Month	2.95 Rs/kWh	INR 20/kW/Month or part thereof	3.30 Rs/kWh
	301 to 400 units	INR 20/kW/Month	3.90 Rs/kWh	INR 20/kW/Month or part thereof	4.40 Rs/kWh
	Above 400 units	INR 20/kW/Month	4.50 Rs/kWh	INR 20/kW/Month or part thereof	5.10 Rs/kWh
B	**Low Tension-LIG/LT-LIG**	INR 20/kW/Month	-	INR 20/kW/Month or part thereof	-
C	**High Tension-D/HT-D**				
	All Units	INR 110/kVA/Month	4.60 Rs/kVAh	INR 110/kVA/Month or part thereof	4.60 Rs/kVAh
2	**Commercial**				
A	**Low Tension-C/LT-C**				
	0-100 units	For consumers with Load upto 20 kW INR 40/kW/Month For consumers with Load more than 20 kW and upto 90 kW INR 60/kW/Month	3.55 INR/kWh	For consumers with Load upto 20 kW INR 45/kW/Month or part thereof For consumers with Load more than 20 kW and upto 90 kW INR 70/kW/Month or part thereof	3.60 INR/kWh
	101-200 units		4.35 INR/kWh		4.40 INR/kWh
	201 units- 400 units		4.85 INR/kWh		5.00 INR/kWh
	Above 400 units		5.25 INR/kWh		5.30 INR/kWh
B	**High Tension-C/HT-C**				
	All Units	INR 250/kVA/month	5.25 INR/kVAh	INR 250/kVA/month or part thereof	5.25 INR/kVAh
3	**Industrial**				
A	**Low Tension-I/LT-I**				
	0-500 units	INR 40/HP/Month	3.40 INR/kWh	INR 50/HP/Month or part thereof	3.60 INR/kWh
	Above 500 units	INR 40/HP/Month	3.95 INR/kWh	INR 50/HP/Month or part thereof	4.25 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**				
	All Units	INR 50/kW/Month	5.25 INR/kWh	INR 60/kW/Month or part thereof	5.60 INR/kWh
C	**High Tension-I/HT-I**				
	Connected at 11/33 kV	INR 250/kVA/Month	4.80 INR/kVAh	INR 275/kVA/Month or part thereof	4.95 INR/kVAh
	Connected at 110 kV	INR 250/kVA/Month	4.70 INR/kVAh	INR 275/kVA/Month or part thereof	4.90 INR/kVAh

	Category	Existing Tariff		Approved Tariff	
		Fixed Charges	Energy Charges	Fixed Charges	Energy Charges
D	**High Tension- Ferro/SM/ PI/ SR**				
	All Units	INR 250/kVA/Month	4.80 INR/kVAh	INR 275/kVA/Month or part thereof	4.95INR/kVAh
4	**Agricultural**				
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 18/HP/Month	1.50 INR/kWh	INR 18/HP/Month or part thereof	1.50 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**				
	All Units	INR 25/HP/Month	1.75 INR/kWh	INR 25/HP/Month or part thereof	1.75 INR/kWh
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**				
	All Units	INR 40/kVA/Month	1.60 INR/kVAh	INR 40/kVA/Month or part thereof	1.60 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**				
	All Units	INR 70/kVA/Month	1.95 INR/kVAh	INR 70/kVA/Month or part thereof	1.95 INR/kVAh
5	**Military Engineering Services/defense Establishments**				
	All Units	INR 200/kVA/Month	4.90 INR/kVAh	INR 220/kVA/Month or part thereof	5.10INR/kVAh
6	**Public Lighting**				
	All Units	INR 70/kW/Month	5.65 INR/kWh	INR 75/kW/Month or part thereof	5.65 INR/kWh
7	**Hoardings/Signboards**				
	All Units	INR 70/kVA/Month	10.00 INR/kWh	INR 70/kVA/Month or part thereof	10.00 INR/kWh
8	**Temporary Supply**				
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply		Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply	
B	LT Temporary Commercial				
C	HT Temporary				
9	**Single Point Supply**				
A	Residential Complexes	INR 110 per kVA per month or part thereof	3.55 INR/kVAh	INR 110 per kVA per month or part thereof	4.60INR/kVAh
B	Commercial Complexes	INR 220 per kVA per month or part thereof	4.80 INR/kVAh	INR 250 per kVA per month or part thereof	5.25INR/kVAh
C	Industrial Complexes	INR 220 per kVA per month or part thereof	4.40 INR/kVAh	INR 275 per kVA per month or part thereof	4.95INR/kVAh
10	**Electric Vehicle Charging Station**	-	3.50 INR/kVAh	-	4.50 INR/kVAh

6.4.3. Revenue from Approved Retail Tariff for FY 2023-24

Based on the retail tariff approved above, the Revenue from approved tariff is shown in the following table. The Commission has not estimated any revenue for Electric Vehicle Charging Station, Residential Complexes and Industrial Complexes categories as no sales have been booked under the respective categories. The Commission as of now approves the k factor for the category as shown in the table, however, directs the Petitioner to submit the requisite data for energy sales, no. of consumers and connected load in case any consumers are identified under these categories. Accordingly, the revenue from approved retail tariff is determined as follows:

Table 108: Revenue from approved retail tariff determined by Commission (In INR Cr)

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
1	**Domestic**	**1469.35**	**46.46**	**427.36**	**473.82**	**3.22**	**0.64**
(i)	**LT-D Domestic**	**1468.06**	**46.41**	**427.18**	**473.59**	**3.23**	**0.64**
	0-100 units	564.39	14.17	98.77	112.94	2.00	0.40
	101-200 units	358.16	10.22	93.12	103.34	2.89	0.57
	201-300 units	196.18	8.02	64.74	72.76	3.71	0.74
	301-400 units	108.71	4.80	47.83	52.63	4.84	0.96
	Above 400 units	240.62	9.21	122.72	131.93	5.48	1.09
(ii)	**Low Income Group**	**0.93**	**0.00**	**-**	**0.00**	**0.02**	**0.00**
(iii)	**HT-D Domestic**	**0.37**	**0.05**	**0.18**	**0.22**	**6.16**	**1.22**
2	**Commercial**	**629.00**	**53.86**	**314.43**	**368.29**	**5.86**	**1.16**
(i)	**LT-C Commercial**	**474.02**	**27.82**	**230.12**	**257.94**	**5.44**	**1.08**
	0-100 units	85.71	7.67	30.86	38.53	4.50	0.89
	101-200 units	51.37	2.44	22.60	25.04	4.87	0.97
	201-400 units	63.77	3.12	31.88	35.00	5.49	1.09
	Above 400 units	273.16	14.59	144.78	159.37	5.83	1.16
(ii)	**HT-C Commercial**	**154.98**	**26.04**	**84.31**	**110.35**	**7.12**	**1.41**
3	**Industrial**	**2341.91**	**215.74**	**1178.91**	**1394.66**	**5.96**	**1.18**
(i)	**LT-I Industrial**	**86.77**	**9.48**	**35.78**	**45.26**	**5.22**	**1.03**
	0-500 units	16.91	4.38	6.09	10.46	6.19	1.23
	Above 500 units	69.86	5.11	29.69	34.80	4.98	0.99
(ii)	**Low Tension-Mixed/LT-P (Hotel Industries)**	**3.90**	**0.16**	**2.19**	**2.35**	**6.02**	**1.19**
(iii)	**High Tension-I/HT-I**	**1756.68**	**171.97**	**894.92**	**1066.89**	**6.07**	**1.21**
	Connected at 11/33 kV	1467.02	147.13	752.32	899.45	6.13	1.22
	Connected at 110 kV	289.66	24.84	142.60	167.44	5.78	1.15
(iv)	**High Tension-Ferro/SM/PI/SR**	**494.55**	**34.13**	**246.02**	**280.15**	**5.66**	**1.12**
4	**Agriculture**	**35.47**	**1.35**	**6.64**	**7.99**	**2.25**	**0.45**
(i)	Low Tension-AG/LT-AGP (Pump Sets/Irrigation)	14.22	0.81	2.13	2.94	2.07	0.41
(ii)	Low Tension-AG/LT-AGA (Allied Activities)	0.65	0.04	0.11	0.15	2.35	0.47
(iii)	High Tension-AG/HT-AGP (Pump Sets/Irrigation)	6.48	0.39	1.62	2.01	3.11	0.62

S. No.	Category	Sales (MUs)	Fixed Charges (INR Cr.)	Energy charges (INR Cr.)	Total Charges (INR. Cr.)	ABR (INR./unit)	K Factor
(iv)	High Tension-AG/HT-AG (Allied Activities)	14.12	0.11	2.77	2.88	2.04	0.40
5	**Military Engineering Services/ defense Establishments**	**33.55**	**1.81**	**17.46**	**19.28**	**5.75**	**1.14**
6	**Public Lighting**	**46.27**	**1.16**	**26.14**	**27.30**	**5.90**	**1.17**
7	**Hoardings/Signboards**	**0.27**	**0.04**	**0.27**	**0.30**	**11.37**	**2.26**
8	**Temporary***	**8.80**	**0.00**	**7.95**	**7.95**	**9.03**	**1.79**
(i)	LT	3.60	0.00	3.06	3.06	8.50	1.69
	LT Domestic	0.25	0.00	0.12	0.12	4.84	0.96
	LT Commercial	3.35	0.00	2.94	2.94	8.78	1.74
(ii)	HT	5.20	0.00	4.89	4.89	9.40	1.87
9	**Single Point Supply**	**5.38**	**0.64**	**2.92**	**3.55**	**6.60**	**1.31**
(i)	Residential Complexes	0.00	0.00	0.00	0.00		0.00
(ii)	Commercial Complexes	5.38	0.64	2.92	3.55	6.60	1.31
(iii)	Industrial Complexes	0.00	0.00	0.00	0.00		0.00
	TOTAL	**4570.01**	**321.06**	**1982.09**	**2303.14**	**5.04**	**1.00**

**1.50 times the k factor of the relevant category in which the connection falls*

The Commission approves revenue from approved Retail Tariff of INR2303.14 Crore for the FY 2023-24.

The average increase in the retail tariff now approved by the Commission vis-à-vis the prevailing tariff is 5.21%. The table below provides the category wise Average Cost of Supply (ACoS), existing Average Billing Rate (ABR), Approved ABR and category wise increase in tariff approved by Commission.

Table 109: Tariff increase approved by Commission

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)	Cross Subsidy level at existing tariff (%)	Cross Subsidy level at approved tariff (%)
Domestic	5.87	2.92	3.22	10.28%	49.8%	54.9%
Commercial	5.87	5.75	5.86	1.79%	98.0%	99.8%
Industrial	5.87	5.69	5.96	4.59%	97.0%	101.5%
Agriculture	5.87	2.25	2.25	0.00%	38.4%	38.4%
Military Engineering Services	5.87	5.49	5.75	4.61%	93.6%	97.9%
Public Lighting	5.87	5.85	5.90	0.88%	99.6%	100.5%
Hoardings/ Signboards	5.87	11.37	11.37	0.00%	193.8%	193.8%

Category	ACoS (Rs/kwh)	ABR at Existing Tariff (Rs/kwh)	ABR at Approved Tariff (Rs/kwh)	Increase (%)	Cross Subsidy level at existing tariff (%)	Cross Subsidy level at approved tariff (%)
Temporary	5.87	8.73	9.03	3.46%	148.8%	153.9%
Single Point Supply	5.87	6.00	6.60	10.12%	102.1%	112.5%
Total	**5.87**	**4.79**	**5.04**	**5.19%**	**81.6%**	**85.9%**

It can be observed in the above table that the Commission has increased the tariff levels for cross-subsidized categories by higher than the average hike and has reduced/maintained the tariff levels at lower than average tariff hike for cross-subsidizing categories.

6.4.4. Revenue Gap/(Surplus) at Approved Tariff

The Govt. of Goa vide its No. 1/14/2021-FIN (BUD)/618 dated 24thJanuary 2023 has conveyed its consent for providing the required budgetary support to meet the revenue gap for the year as may be approved by the Commission. Moreover, no gap is carried forward from previous years to FY 2023-24 as the Govt. of Goa had provided an upfront budgetary support for the entire gap in FY 2023-24.

In view of above the Commission approves the revenue gap as follows:

Table 110: Revenue Gap/ (Surplus) approved by Commission for FY 2023-24 (In INR Cr)

S. No.	Particulars	FY 2023-24
1	Net Revenue Requirement	2,682.53
2	Revenue from Retail Sales at Existing Tariff	2,189.60
3	Revenue from Retail Sales at Approved Tariff	2,303.14
4	Revenue Gap/ (Surplus) at Existing Tariff	492.93
5	Revenue Gap/ (Surplus) at Approved Tariff	379.39
6	Gap/(Surplus) for the previous year	-
7	Total Gap/ (Surplus)	379.39
8	Budgetary support from Govt. of Goa	379.39
9	**Final Gap/ (Surplus) for FY 2022-23**	-

The Govt. of Goa has given an upfront commitment to bridge the revenue gap by way of budgetary support, in line with the practice followed in previous years.

6.4.5. Government Budgetary Support

The Commission has approved an overall revenue gap of INR 379.39 Crore at approved tariff in FY 2023-24. The Govt. of Goa vide its letter No. 1/14/2021-FIN (BUD)/618 dated 24thJanuary 2023 has given an upfront commitment to bridge the revenue gap by way of budgetary support for any revenue gap that may arise.

It is observed that the Govt. of Goa has been providing budgetary assistance to the Petitioner during the past few years. The Commission in this matter would like to point out the over reliance of the Petitioner on Govt.'s budgetary support. The Petitioner should prepare itself of the repercussions in case the Govt. withdraws the budgetary support in the future.

The ABR without the Government Budgetary support has been calculated considering the per unit gap of INR 0.83/kWh (difference between ACoS and ABR at Approved Tariff with Govt. Budgetary Support). However, **the Commission would like to highlight that in case this gap had to be entirely fulfilled by revenue from consumers then it would have demanded an additional average tariff increase of 16.47%**

6.4.6. Highlights of the Tariff Structure

The highlights of the tariff structure approved by the Commission for FY 2023-24 are as follows:

1. The Govt. of Goa vide its letter No. 1/14/2021-FIN (BUD)/618 dated 24th January 2023 has conveyed its consent for providing the required budgetary support to meet the revenue gap for the year as may be approved by the Commission. The Commission acknowledges the letter of assurance from the Government of Goa towards meeting any prospective revenue gap for FY 2023-24.

2. The Petitioner has proposed a tariff hike of 6% in the tariff schedule of FY 2023-24.

3. The Commission has approved an average tariff hike of 5.19% to further reduce the reliance of the Petitioner on budgetary support from the Govt. of Goa.

4. The Commission has rationalised the tariff levels for cross-subsidized categories by marginally higher than the average hike and has reduced/maintained the tariff levels at lower than average tariff hike for cross-subsidizing categories.

7. Chapter 7: Open Access Charges for the FY 2023-24

7.1. Wheeling Charges

7.1.1. Allocation Matrix - Allocation of ARR into Wheeling and Retail Supply of Electricity

Petitioner's Submission:

The Petitioner has submitted the bifurcation of all expenses of FY 2023-24 between the functions of wheeling business (wire business) and retail supply business based on the Regulation 49 of the JERC MYT Regulations, 2021. The summary of the allocation statement and the segregation of ARR into wheeling and retail supply business for FY 2023-24 is given in the table below:

Table 111: Allocation matrix as submitted by the Petitioner

Sl. No.	Particulars	Distribution Wires Business	Retail Supply Business	FY 2023-24 (INR Cr.)		
		%	%	Distribution Wire business	Retail Supply Business	Total
1	Cost of Power Purchase from Own Generating Stations					
2	Cost of Power Purchase from other Generating Stations	0%	100%	-	2013.94	2,013.94
3	Inter State Transmission Charges	0%	100%	-	-	-
4	Intra State Transmission Charges					-
5	SLDC Fees & Charges					-
6	O&M Expenses (Gross)			241.23	284.64	525.87
	a) R&M Expenses	90%	10%	49.16	5.46	54.62
	b) Employee Cost	40%	60%	174.21	261.31	435.52
	c) A&G Expenses	50%	50%	17.87	17.87	35.73
7	Depreciation	90%	10%	69.97	7.77	77.75
8	Interest and Finance Charges	90%	10%	40.37	4.49	44.86
9	Interest on Working Capital	10%	90%	5.94	10.57	16.51
10	Prior Period Expenses					-
	Interest on Consumer Security Deposit	10%	90%	0.54	4.83	5.37
11	**Extraordinary Items**					
12	Bad and Doubtful Debts	0%	100%			
13	**Other Debts and Write-offs**					
14	**Statutory Levies and Taxes, if any**					
15	Less: Expenses Capitalised					
	a) Interest Charges Capitalized					
	b) R&M Expenses Capitalized					
	c) A&G Expenses Capitalized					

Sl. No.	Particulars	Distribution Wires Business	Retail Supply Business	FY 2023-24 (INR Cr.)		
		%	%	Distribution Wire business	Retail Supply Business	Total
	d) Employee Cost Capitalized					
	Sub Total (a+b+c+d)					
	Sub Total Expenditure (1 to 14-15)			426.96	2307.30	2,684.30
16	Return on Equity	90%	10%	71.89	7.99	79.88
17	Less: Non-Tariff and other Income	10%	90%	2.99	26.93	29.93
18	Less: Any Grant/ Subventions, other subsidy provided by the Government					-
19	**Annual Revenue Requirement**			**426.96**	**2307.30**	**2,734.25**
20	**Energy Sales**					**4,561.91**
21	**Average Cost of Supply (Rs./kWh)**					**5.99**

The Petitioner has further submitted that it has computed the wheeling charges based on the following methodology:

a) O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level based on number of consumers.

b) All expenses other than the O&M expenses are allocated to each voltage level based on voltage wise asset allocation.

c) The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.

Accordingly, the computation of Wheeling charges as submitted by the Petition has been shown in the following table:

Table 112: Wheeling Charge calculation as submitted by Petitioner

Category	O&M expenses (INR Cr.)	Other Expenses (INR Cr.)	Total Expenses (INR Cr.)	Sales (MU)	Wheeling Charges (INR/kWh)
Low Tension (LT) Level	240.81	111.43	352.24	2071.21	1.70
High Tension (HT)/ Extra High Tension (EHT)Level	0.43	74.29	74.71	2490.70	0.30
Total	**241.23**	**185.72**	**426.96**	**4561.91**	**0.94**

Commission's analysis:

The allocation between wheeling and retail supply business for the FY 2023-24as per the ARR approved in this Order is provided in the table below:

Table 113: Allocation matrix approved by Commission

Particulars	Allocation (%)		FY 2023-24		
	Wires Business (%)	Retail Supply Business (%)	Wires Business (Rs Cr)	Retail Supply Business (Rs Cr)	Total ARR (Rs Cr)
Power purchase expenses inclusive of Inter-State Transmission expenses	*0%*	*100%*	0.00	2027.60	2027.60
Employee costs	*40%*	*60%*	178.90	268.35	447.24
Administration and General Expenses	*50%*	*50%*	16.81	16.81	33.61
Repair and Maintenance Expenses	*90%*	*10%*	44.04	4.89	48.93
Depreciation	*90%*	*10%*	53.42	5.94	59.36
Interest on Loan	*90%*	*10%*	24.41	2.71	27.12
Interest on Working Capital	*10%*	*90%*	1.21	10.88	12.09
Return on Equity	*90%*	*10%*	64.06	7.35	71.41
Interest on consumer security deposit	*10%*	*90%*	0.54	4.83	5.37
Bad & Doubtful Debt written off	*0%*	*100%*	0.00	0.00	0.00
Income Tax	*90%*	*10%*	0.00	0.00	0.00
Total Revenue Requirement			**383.38**	**2349.35**	**2732.74**
Less: Non-Tariff Income	*10%*	*90%*	5.02	45.19	50.21
Net Revenue Requirement			**378.36**	**2304.17**	**2682.53**

To determine the wheeling charges, the wheeling costs are allocated on the basis of voltage levels. The wheeling charges are levied for the distribution network utilized by the Open Access consumers and primarily comprises of O&M Expenses and other costs as provided in the table above.

The methodology adopted for allocating the derived wheeling costs at respective voltage levels has been elaborated as follows:

- O&M Expenses consisting of Employee, A&G and R&M expenses are allocated to each voltage level on the basis of number of consumers

- All expenses other than the O&M expenses are allocated to each voltage level on the basis of voltage wise asset allocation. The Petitioner in this regard was directed to submit the voltage wise asset allocation but has failed to submit the desired information and in the absence of such information, the Commission has assumed the voltage wise asset allocation.

- The resultant cost at HT/EHT voltage level derived after performing the above steps is then divided between LT and HT/EHT voltage level on the basis of input energy at respective voltage levels, since the HT/EHT network is used by consumers of both HT/EHT and LT voltage levels.

- The energy input has been determined assuming the cumulative loss level of HT/EHT voltage as 3.55%, which is the same as considered by the Petitioner. The Petitioner in this regard has failed to submit the voltage wise losses. The resultant losses have been loaded to the LT voltage level in order to maintain the overall Intra-State T&D loss at 8.20% as approved in the MYT trajectory.

Table 114: Parameters assumed for voltage wise allocation of wheeling costs

Category	No. of Consumers	Asset Allocation (%)	Sales (MU)	Cumulative Voltage wise Losses (%)
Low Tension (LT) Level	723,532	60.00%	2,098.68	13.14%
High Tension (HT)/ Extra High Tension (EHT) Level	1,341	40.00%	2,471.33	3.55%
Total	**724,872**	**100.00%**	**4,570.01**	**8.20%**

Accordingly, the Commission approves the Wheeling Charges as shown in the table below:

Table 115: Allocation of costs based on voltage level

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)
Low Tension (LT) Level	239.52	110.08	349.60
High Tension (HT)/ Extra High Tension(EHT) Level	0.23	28.54	28.77
Total	**239.75**	**138.62**	**378.36**

Table 116: Wheeling Charges approved by Commission

Category	O&M (INR Cr)	Others (INR Cr)	Total (INR Cr)	Sales (MU)	Wheeling Charges (INR/kWh)
Low Tension (LT) Level	239.52	110.08	349.60	2,098.68	1.67
High Tension (HT)/ Extra High Tension (EHT) Level	0.23	28.54	28.77	2,471.33	0.12
Total	**239.75**	**138.62**	**378.36**	**4,570.01**	

The Commission approves wheeling charge of INR 1.67/kWh at LT voltage level and INR 0.12/kWh at HT/EHT voltage level

7.2. Additional Surcharge

Petitioner's submission:

The Petitioner has computed the additional surcharge based on the methodology prescribed in the JERC OA Regulations 2017. The additional surcharge determined by the Petitioner for FY 2023-24 has been provided in the table as follows:

Table 117: Additional Surcharge calculation as submitted by Petitioner

Particulars	FY 2023-24
Total Power Purchase cost approved	2,013.94
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	421.43
Energy Sales (MU)	4561.91
Additional Surcharge (INR/kWh)	**0.92**

Commission's analysis:

The Commission has notified the Joint Electricity Regulatory Commission for the State of Goa and Union Territories (Connectivity and Open Access in Intra-State Transmission and Distribution) Regulations, 2017. Regulation 4.5 (1) of the said Regulations states the following:

"An Open Access Consumer, receiving supply of electricity from a person other than the Distribution Licensee of his area of supply, shall pay to the Distribution Licensee an additional surcharge in addition to wheeling charges and cross-subsidy surcharge, to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply as provided under sub-section (4) of Section 42 of the Act"

Regulation 4.5 (2) of the said Regulations stipulates:

This additional surcharge shall become applicable only if the obligation of the Licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs by the Licensee consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.

Further, Regulation 5.2 (1) (b) states the following:

The quantum of drawal of electricity by a partial Open Access Consumer from the Distribution Licensee during any Time Block of a Day should not exceed the "Admissible Drawl of Electricity by the Open Access Consumer" which is the difference of Contract Demand and maximum quantum of Open Access for which approval has been granted by the Nodal Agency.

[Illustration: If an Open Access Consumer with a Contract Demand of 10 MW has been given an approval for a maximum Open Access quantum of 6MW for a period of 3Months, the Admissible Drawl of Electricity from the Distribution Licensee during any Time Block shall be 4 MW for any Day during a period of 3 Months.]"

Therefore, in accordance with the above Regulations, the Commission has determined the Additional Surcharge as per the following:

Table 118: Additional Surcharge approved by Commission

Particulars	**2023-24**
Total Power Purchase cost approved	2027.60
Fixed Cost component in Power Purchase Cost (excluding Transmission Charges)	425.19
Energy Sales (MU)	4,570.01
Additional Surcharge (INR/kWh)	**0.93**

Earlier, a consumer availing Open Access was required to pay fixed charges on contracted load even when the load was drawn partially from the Distribution Licensee. In addition, the consumer was also required to pay wheeling charges, additional surcharge and the cross-subsidy surcharge. **As per the new "Open Access Regulations, 2017", a consumer is now required to pay fixed charges on reduced demand after adjusting for demand drawn through Open Access in accordance with the regulation.**

The Commission approves an Additional Surcharge of INR0.93/kWh for FY 2023-24.

The Commission directs the Petitioner to submit quarterly details of the power stranded on account of consumers opting for open access along with the Additional Surcharge recovered from these consumers. The Commission will analyse the information and change the applicable Additional Surcharge, if required.

7.3. Cross-Subsidy Surcharge

Petitioner's submission:

The Petitioner has adopted the same methodology for computation of Cross-Subsidy Surcharge as approved by the Commission in the Tariff Order for FY 2022-23. The cross-subsidy surcharge determined by the Petitioner for FY 2023-24 has been provided in the table as follows:

Table 119: Cross-Subsidy Surcharge as proposed by the Petitioner

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Low Tension (LT) Level	7.07	4.15	-
High Tension (HT)/ Extra High Tension(EHT) Level	5.10	6.13	1.03

Commission's analysis:

The Commission in this Order has calculated the cross-subsidy surcharge with respect to voltage wise cost of supply. The following approach has been adopted to determine the voltage wise cost of supply:

- Voltage Wise losses are assumed for HT/EHT voltage level. The remaining losses are adjusted in the LT voltage level in order to maintain the Intra-State T&D losses at 8.20%, as approved in the ARR for FY 2023-24. Voltage wise losses assumed at each level have been shown in the table below:

Table 120: Voltage wise losses assumed by Commission

Category	Voltage Level Loss (%)	Cumulative Losses upto that voltage level (%)
Low Tension (LT) Level	9.95%	13.14%
High Tension (HT)/ Extra High Tension (EHT) Level	3.55%	3.55%

Using these losses, the energy input at each voltage level is determined based on the energy sales. The following table shows the energy input at each voltage level

Table 121: Energy Input at each voltage level (MU)

Category	Energy Sales (MU)	Cumulative Losses (%)	Energy Input (MU)
Low Tension (LT) Level	2,098.68	13.14%	2,415.94
High Tension (HT)/ Extra High Tension (EHT) Level	2,471.33	3.55%	2,562.29
Total	**4,570.01**	**8.20%**	**4,978.22**

Now the overall ARR approved for FY 2023-24 is divided into variable and fixed ARR with variable ARR comprising of variable component of the power purchase cost and fixed ARR comprising of all the other costs.

The fixed component comprising of fixed cost of power purchase, O&M etc. is further allocated to each voltage category as per the following principles:

- The fixed cost of power purchase is assigned to each voltage level on the basis of energy input at respective voltage levels.

- The O&M expenses are allocated to each voltage level on the basis of the number of consumers. The resultant cost allocated to HT/EHT level is then further allocated between HT/EHT and LT level on the basis of input energy, as the HT/EHT network is utilized by both LT and HT/EHT network consumers.

- The remaining fixed costs are allocated on the basis of voltage wise asset allocation assumed earlier and further allocated to respective voltage levels on the basis of input energy.

Table 122: Parameters used for allocation of fixed costs

Category	Energy Input (MU)	Voltage wise Asset Allocation (%)	Number of Consumers
Low Tension (LT) Level	2,415.94	60.00%	723,532
High Tension (HT)/ Extra High Tension(EHT) Level	2,562.29	40.00%	1,341
Total	**4,978.22**	**100.00%**	**724,872**

The Variable component of the Power purchase cost is allocated on the basis of energy input. The Voltage wise cost of supply (VCoS) is then determined on the basis of energy sales of respective categories. Accordingly, the VCoS is determined as shown in the table below:

Table 123: Voltage Wise Cost of Supply (VCoS)

Category	Allocated Fixed Cost (INR Cr)	Allocated Variable Cost (INR Cr)	Total Cost (INR Cr)	Energy Sales (MU)	VCoS (INR/kwh)
Low Tension (LT) Level	982.39	630.26	1,612.66	2,098.68	7.68
High Tension (HT)/ Extra High Tension(EHT) Level	401.43	668.44	1,069.87	2,471.33	4.33
Total	**1,383.82**	**1,298.71**	**2,682.53**	**4,570.01**	

This, VCoS is then used to determine the Cross-Subsidy Surcharge at each voltage level.

Table 124: Cross-Subsidy Surcharge approved by Commission (INR/kWh)

Category	VCoS (INR/kWh)	ABR (INR/kWh)	Cross- Subsidy (INR/kWh)
Low Tension (LT) Level	7.68	6.03	-
High Tension (HT)/ Extra High Tension(EHT) Level	4.33	3.87	-

The Commission approves NIL Cross-Subsidy Surcharge at LT Voltage level and at HT/EHT Voltage level, in FY 2023-24.

8. Chapter 8: Fuel and Power Purchase Adjustment Mechanism

The State of Goa and Union Territories of Andaman & Nicobar Islands, Lakshadweep Island, Chandigarh, Daman & Diu, Dadra & Nagar Haveli and Puducherry receive power from the Central Generating Stations, State Generating Stations, Independent Power Producer's (IPP's) through the long-term power purchase agreements and short-term purchases – through exchange, bilateral purchases etc. The distribution licensees procure power from various available sources and supply power to the consumers at retail tariffs determined by the Commission. Power purchase cost accounts for more than 80% of the Annual Revenue Requirements (ARR) of the distribution licensees and includes the cost paid for procurement of power, transmission charges, Deviation Settlement Mechanism (DSM) charges, State Load Despatch Center (SLDC)/Regional Load Despatch Center (RLDC) charges and is netted off with revenue earned from the sale of surplus power.

The cost of the long-term power being procured by the distribution licensees is fixed by the Central Electricity Regulatory Commission (CERC) for plants supplying power to more than one State/UT (for example NTPC, NHPC etc.) and by the JERC for plants located within the region (for IPP's, licensees own generation and other State generating sources). Charges for the Over-drawal/Under-drawal from the Grid and the Inter-State Transmission charges, RLDC charges are fixed by the CERC, while Intra-State Transmission charges and SLDC charges are fixed by the JERC. Short term purchase/ sale of power is done through traders, bilateral contracts, banking and power exchanges at market-determined prices.

While determining retail tariff for any year, the Commission first determines the ARR based on the projection of various cost elements including power purchase cost. Power purchase cost of the distribution licensee is derived from the power purchase quantum and per unit power purchase cost. Quantum of power purchase depends upon the energy sales to the retail consumer and distribution losses, out of which energy sales is not under the control of the distribution licensee. There is also variation in actual per unit power purchase cost vis-a-vis projected per unit power purchase cost due to change in fuel cost, change in power purchase mix i.e. thermal/hydel/renewable mix, long term/short term power mix etc. This makes power purchase cost uncontrollable in nature.

The Commission undertakes the truing up exercise for the variation in the cost and revenue once the audited accounts of the distribution licensee are available. For example, True-up of FY 2021-22 will be undertaken by the Commission once the audited accounts of FY 2021-22 are available. If the audited accounts for FY 2021-22 are prepared timely, the impact of true-up of various cost and revenue items is allowed in the tariff of FY 2023-24, along with the carrying cost for 2 years. As the power purchase cost is the major cost element of the ARR of the distribution licensee, adjustment due to change in power purchase cost at regular intervals is important in order to avoid the burden of carrying cost on the additional power purchase cost incurred during the year.

8.1. Legal Provisions

The relevant provisions of the Electricity Act, Regulations, Policy document and the ATE judgments, which enable the Commission to devise, adopt and implement a power purchase/ fuel price adjustment mechanism are as follows:-

(a) Electricity Act, 2003- Section 62 (4)

"No tariff or part of any tariff may ordinarily be amended more frequently than once in any financial year, except in respect of any changes expressly permitted under the terms of any fuel surcharge formula as may be specified."

(b) Tariff Policy, 2016, clause 5.11 – sub-clause (h-4)

"Uncontrollable costs should be recovered speedily to ensure that future consumers are not burdened with past costs. Uncontrollable costs would include (but not limited to) fuel costs, costs on account of

inflation, taxes and cess, variations in power purchase unit costs including on account of adverse natural events."

(c) Tariff Policy, 2016, clause 8.2– sub-clause 8.2.1-(1)

"8.2 Framework for revenue requirements and costs
Actual level of retail sales should be grossed up by normative level of T&D losses as indicated in MYT trajectory for allowing power purchase cost subject to justifiable power purchase mix variation (for example, more energy may be purchased from thermal generation in the event of poor rainfall) and fuel surcharge adjustment as per regulations of the SERC."

(d) Hon'ble ATE judgement in OP1 of 2011 dated 11 November 2011

The Hon'ble ATE directed the SERCs to develop a power purchase cost adjustment mechanism within six months of the date of the Order. The relevant excerpt of the Order is shown as follows:
"(vi)Fuel and Power Purchase cost is a major expense of the distribution Company which is uncontrollable. Every State Commission must have in place a mechanism for Fuel and Power Purchase cost in terms of Section 62 (4) of the Act. The Fuel and Power Purchase cost adjustment should preferably be on monthly basis on the lines of the Central Commission's Regulations for the generating companies but in no case exceeding a quarter. Any State Commission which does not already have such formula/mechanism in place must within 6 months of the date of this Order must put in place such formula/mechanism."

8.2. Formula

The following mechanism shall be followed for calculation and adjusting variations on account of Fuel and Power Purchase Cost in the end consumer tariff, which shall come into force w.e.f. 1st April 2023 (i.e. Power Purchased by the Licensee from 1st April 2023 onwards).

1. Periodicity for recovery (Cycle)

The licensee shall compute the fuel and power procurement cost variations on a quarterly basis. The adjustment shall be made in the consumers bills starting after a month following the end of the quarter on the units billed in the months following the quarter.

For example, FPPCA for the quarter April-June shall be done in the month of July and shall be reflected in the consumer bills raised in the months of August, September and October on the units billed for the months of July, August and September respectively.

2. Chargeability

FPPCA charges shall be levied on all consumer categories excluding Below Poverty Line (BPL) and Agriculture category consumers on per unit basis on monthly/ bi-monthly consumption depending on the billing cycle.

3. Formula

The FPPCA formula shall contain the following three components:

1. Power Purchase Cost adjustments which shall contain the following elements:
   - Variation in the Power Purchased from long term/ firm sources viz. CGS, IPP's, State, Own generation etc. This may consist of fixed cost, variable costs, arrears, other charges but excluding any kind of penalties
   - Variation in Short term power purchase cost through IEX, Bilateral etc. (shall be allowed upto a certain ceiling rate as may be fixed in the Tariff Order by the Commission).

- Variation on account of Deviation Settlement Mechanism – shall be allowed, but the incentive/penalty shall be excluded

2. Transmission cost adjustments which shall contain the following elements:
   - Variation on account of Central Transmission Charges including arrears/ revisions.
   - Variation on account of State Transmission charges including arrears/revisions

3. Other Charges which shall contain all the other elements not forming part of the above two components for example:
   - Any adjustments /reversals due to over recovery of charges
   - Any adjustments due to under recovery of charges in case the Commission decides to limit the FPPCA charges in previous quarters to avoid tariff shock or other reasons
   - Any other adjustments on account of factors not envisaged at the time of tariff fixation

4. Less any revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost.

Based on the components as defined above, the new FPPCA formula can be represented as follows:

$$\boldsymbol{FPPCA}\left(\frac{\boldsymbol{INR}}{\boldsymbol{Unit}}\right) =. \left(\frac{(\boldsymbol{Pact} + \boldsymbol{Tact} + \boldsymbol{Oact} - \boldsymbol{ASact}) * \mathbf{10}}{\{[\boldsymbol{PPOact} * (\mathbf{1} - \boldsymbol{TLapp}) + \boldsymbol{PPIact} - \boldsymbol{PSOact}] * (\mathbf{1} - \boldsymbol{DLapp})\} - \boldsymbol{Zact}}\right) - \boldsymbol{Rapp}$$

Where:

- $Pact (in\ INR\ Cr.)$: Actual Power purchase cost inclusive of fixed cost, variable costs, arrears, and other charges excluding any kind of penalties incurred in the quarter. This shall include:
  - Cost of procurement from sources outside the State,
  - Cost of procurement from sources within the State,
  - Cost of DSM excluding any penal charges,
  - Cost of procurement from the Bilateral/ exchange etc.
  - Less: Revenue from sale of surplus power/ DSM
- $Tact\ (in\ INR\ Cr.)$: Actual Transmission cost inclusive of any kind of arrears, other charges etc. and excluding any kind of penalties incurred in the quarter. This shall include:
  - Inter-State transmission cost (PGCIL charges),
  - Intra-State transmission cost
- $Oact\ (in\ INR\ Cr.)$: Adjustments from the previous FPPCA quarter on account of over/ under recovery and any other incidental costs not accounted for at the time of retail tariff fixation
- $ASact\ (in\ INR\ Cr.)$: Revenue from Additional Surcharge collected from Open Access consumer towards the stranded power purchase cost
- $PPOact\ (in\ MU)$: Quantum of power purchased in the quarter from sources outside State/ Union Territory
- $TLapp\ (in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIact\ (in\ MU)$: Quantum of power purchased in the quarter from sources within State/Union Territory, Bilateral/ Exchange and Over-drawal under the DSM
- $PSOact\ (in\ MU)$: Actual quantum of sale of surplus power/ under-drawal under the DSM in the quarter

- $DLapp$ $(in\ \%)$: Approved T&D losses for the year in consideration as provided in the relevant Tariff Order
- $Zact$ $(in\ MU)$: Actual energy sales for agriculture and BPL category consumers in the quarter

$$Rapp\ (\frac{INR}{unit}) = \left(\frac{(Papp + \ Tapp\ ) * 10}{\{[PPOapp * \ (1 - TLapp) + PPIapp - PSOapp] * (1 - DLapp)\} - Zapp}\right)$$

- $Papp$ $(in\ INR\ Cr.)$: Total power purchase cost approved in the Tariff Order for a quarter inclusive of fixed costs, variable costs etc. and containing the following elements:
    - Cost of procurement from sources outside the State,
    - Cost of procurement from sources within the State,
    - Cost of procurement from the Bilateral/ exchange etc.
    - Less: Revenue from sale of surplus power
- $Tapp$ $(in\ INR\ Cr.)$: Total transmission charges approved in the Tariff Order for a quarter consisting of the following elements:
    - Inter-State transmission charges (PGCIL charges),
    - Intra-State transmission charges
- $PPOapp$ $(in\ MU)$: Quantum of power to be procured from sources outside State/ Union Territory in a quarter as approved in the Tariff Order
- $TLapp$ $(in\ \%)$: Approved Inter- State transmission losses for the year in consideration as provided in the relevant Tariff Order
- $PPIapp$ $(in\ MU)$: Quantum of power to be procured from sources within the State, bilateral/ exchange in a quarter as approved in the Tariff Order
- $DLapp$ $(in\ \%)$: Approved T&D losses for the year in consideration as provided in the Tariff Order
- $PSOapp$ $(in\ MU)$: Quantum of sale of surplus power approved in the Tariff Order for a quarter
- $Zapp$ $(in\ MU)$: Sales for agriculture and BPL category consumers for a quarter as approved in the relevant Tariff Order

4. Other Terms and conditions

1. For the purpose of the Fuel and Power Purchase Cost Adjustment, the Commission suggests that all the bills admitted and credits, if any, received by the distribution licensee during the period in consideration, irrespective of the period to which they pertain, may be considered.

2. The FPPCA charges determined as per the formula above may be recovered from the consumers of all categories based on their billed units excluding the BPL and the agriculture category consumers.

3. The FPPCA charges for a quarter shall be limited to $\pm$10% of the ABR for a consumer category. The distribution licensee shall be allowed to collect the FPPCA without obtaining approval from the Commission. However, the distribution licensee shall be required to submit the FPPCA calculation to the Commission at least one week before levying the same on the consumers.

4. The per unit FPPCA so worked out is charged differentially as per the approved retail tariff of the consumers. The determination of differential per unit FPPCA is mentioned below:
    - Step 1: Determination of Value of K

$$\frac{Approved\ Retail\ Tariff\ for\ a\ category\ or\ subcategory\ (\frac{INR}{unit})}{Weighted\ Average\ Retail\ Tariff (WART)(\frac{INR}{unit})}$$

The value of K for different consumer category or sub-category for the year in consideration is considered as approved in this Tariff Order.

- Step 2: Determination of proportionate FPPCA (INR /unit) consumer category/sub-category wise

$$FPPCA\left(\frac{INR}{Unit}\right) = Average\ FPPCA * K\ for\ that\ consumer\ category\ or\ sub - category$$

5. The Petitioner shall compute the fuel and power procurement cost variations, and adjustments shall be made in the consumer bills based on the FPPCA formula as approved by the Commission in this Order.

For the purpose of calculation, the approved per unit cost of power purchase ($R_{approved}$) shall be taken as INR 4.44/kWh for the FY 2023-24.

Table 125: Rapproved determined by Commission for FY 2023-24

Particulars	Amount
Total Power Purchase Cost (INR Cr), P_{app}	1,710.47
Transmission Charges (INR Cr), T_{app}	303.70
Power Purchase Quantum from CGS Stations at Ex-Bus Periphery (NTPC, NPCIL) (MU), PPO_{app}	4,206.17
Approved Weighted Average Inter-State Transmission Loss (%), TL_{app}	3.53%
Power Purchase Quantum from sources within State/ Open Market/ Renewable Sources (MU), PPI_{app}	1,033.19
Quantum of Sale of Surplus Power (MU), PSO_{app}	112.73
Approved Intra-State T&D Loss (%), DL_{app}	8.20%
Energy Sales for LIG/BPL and Agriculture consumer category (MU), Z_{app} (MU)	36.40
R_{app} (INR/kWh)	**4.44**

9. Chapter 9: Directives

Over the years, the Commission has issued various directives to the Petitioner for necessary action at its end. It has been observed that the Petitioner is not fully complying with many of the directives issued by the Commission. In order to strengthen the effective monitoring and ensure timely implementation of all the directives in true spirit, the Commission hereby directs that the Petitioner shall now submit:

- ***The detailed action plan for compliance of all the directives <u>within 1 month of the issuance of this Order</u>.***
- ***The quarterly progress report as per the detailed action plan for all the directives issued in the subsequent sections <u>within 10 days of the end of each quarter of the calendar year</u>.***

9.1. Directives continued in this Order

While examining the compliance note and supporting documents submitted by the Petitioner in the present Petition, it is observed that some of the directives issued in the previous Tariff Orders have not been fully complied with by the Petitioner.

The Commission is of the view that substantial time has already been given to the utility for compliance with these directions. Thus, the Commission hereby directs the utility to comply with the directions mentioned below in the given timeframe, failing which the Commission shall be constrained to initiate appropriate action under the Electricity Act, 2003 and Regulations made there under.

9.1.1. Annual Statement of Accounts

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 31stMarch 2022 *As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner has failed to comply with the directive every year since the issuance of Tariff Order dated 27th June 2012. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 by November 2022 along with Tariff petition for FY 2023-24.*
Petitioner's Response in the Present Tariff Petition EDG has filed the True-up Petitions for FY 2017-18, FY 2018-19 & FY 2019-20 before the Hon'ble JERC on August 2022 and Public hearing for the same is also been conducted. Financial Accounts for FY 2020-21 & FY 2021-22 are completed. The CAG audit team is auditing the accounts. Upon completion of the audit of the Accounts for FY 2020-21 & FY 2021-22 the True-up Petitions for FY 2020-21 & FY 2021-22 will be submitted before the Hon'ble JERC by December 20, 2022.
Commission's Response *The Commission has noted the Petitioner's submission regarding the submission of pending audit accounts. Further, the Commission directs the Petitioner to file true-ups based on audited accounts along with the upcoming tariff petitions going forward in a timely manner. Accordingly, the Commission drops this directive.*

9.1.2. Preparation of Fixed Asset Register

Originally Issued in Tariff Order dated 27th June 2012

Commission's Latest Directive in Tariff Order dated 31st March 2022 *The Petitioner is directed to submit the information up to FY 2021-22 in the next tariff petition, along with the audited annual accounts as sought in the preceding directive. The Petitioner is to also ensure that the FAR reports contain the details of the assets which have completed 90% of their but are still included in the FAR.*
Petitioner's Response in the Present Tariff Petition The FAR for FY 2020-21 & FY 2021-22 will be submitted along with the Audited accounts in the True-Up Petitions of FY 2020-21 & FY 2021-22.
Commission's Response *The Commission has noted the Petitioner's submission and accordingly drops this directive.*

9.1.3. Energy Audit Reports

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 31st March 2022 *The Commission has noted with serious concern that the Petitioner has not submitted the Energy Audit Reports for previous years despite repeated directions. The Commission directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority, and positively submit the same along with Tariff Petition for FY 2023-24.*
Petitioner's Response in the Present Tariff Petition As per the guidelines from Bureau of Energy Efficiency, Quarterly and Annual Audits have to be carried out by each DISCOM. EDG has already submitted draft Annual Audit reports for the year 2020-21 and 2021-22 to the consultant appointed by GED for scrutiny. The Quarter and Annual reports for the year 2020-21 and 2021-22 will be submitted to BEE immediately after the scrutiny from the consultants and the same will be submitted to hon'ble JERC.
Commission's Response *The Commission has noted the Petitioner submission and directs the Petitioner to expedite the process and complete the Energy Audit of the State on priority, and positively submit the same along within three months of issuance of this order.*

9.1.4. Employee Cost / Manpower study

Originally Issued in Tariff Order dated 27th June 2012
Commission's Latest Directive in Tariff Order dated 31st March 2022 *The Commission is yet to receive the Manpower Study report from the Petitioner. The Commission directs the Petitioner to submit the same within one month of the issuance of this Order.*
Petitioner's Response in the Present Tariff Petition *ED-Goa has completed the Employee Cost/Manpower Study. The same is submitted along with the petition.*
Commission's Response *The Commission has noted the Petitioner's submission and accordingly drops this directive.*

9.1.5. Interest on Consumer Security Deposit

Originally Issued in Tariff Order dated 31st March 2013
Commission's Latest Directive in Tariff Order dated 31st March 2022

The Commission reiterates that the Petitioner is directed to ensure payment of interest on security deposit upto FY 2021-22 as per the provisions of Supply Code, 2018.
Petitioner's Response in the Present Tariff Petition *The payment of Interest towards consumer's security deposit upto FY 2021-22 is Rs. 5.50 Crore is paid to the consumers.*
Commission's Response *The Commission has noted the Petitioner's submission and accordingly drops this directive.*

9.1.6. *Sub-Divisions as Strategic Business Units*

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 31st March 2022 *The Commission is yet to receive the compiled data as stated by the Petitioner. The Petitioner is directed to submit the same within one month of the issuance of this Order*
Petitioner's Response in the Present Tariff Petition *While collecting the Data for Strategic Business Unit for Sub-Division of Division 4 & 17 it is observed that the Sub-Divisions of the said divisions are transferring power between them and the same is not accounted. In this regard there is an issue in determining the exact distribution loss at Sub-Division Level. So, after completion of the Energy Auditing at Sub-Division level the same shall be initiated.*
Commission's Response *The Commission is yet to receive the compiled data as stated by the Petitioner. The Petitioner is directed to submit the same within three month of the issuance of this Order*

9.1.7. *Installation of Pre-Paid Meters*

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 31st March 2022 *The Commission directs the Petitioner to expedite the process and submit an updated status with the next quarterly progress report.*
Petitioner's Response in the Present Tariff Petition *The Electricity Department has been sanctioned 750356 Prepaid Smart meters under Revamped Distribution Sector Scheme (RDSS) as per the Sanction letter dated 10/10/2022 attached as Annexure-4. The Electricity Department is in process of obtaining approvals for floating of the tender. The timelines for installation of all Pre-paid Smart meters is March, 2025.*
Commission's Response *The Commission directs the Petitioner to expedite the process and submit an updated status with the next quarterly progress report.*

9.1.8. *Unbundling of Electricity Department*

Originally Issued in Tariff Order dated 06th April 2015
Commission's Latest Directive in Tariff Order dated 31st March 2022 *The Commission directs the Petitioner to submit the documentary evidence for the decision of the Govt. of Goa to the Commission within one month of the issuance of this Order.*

Originally Issued in Tariff Order dated 06th April 2015

Petitioner's Response in the Present Tariff Petition

EDG had submitted proposal to the Government in regard to Unbundling of the Electricity Department. The documentary evidence in regard to the decision of the Government will be submitted no sooner received from the Government of Goa.

Commission's Response

The Commission directs the Petitioner to pursue the matter on priority and submit the documentary evidence for the decision of the Govt. of Goa to the Commission within three month of the issuance of this Order.

9.1.9. Renewable Purchase Obligation

Originally Issued in Tariff Order dated 06th April 2015

Commission's Latest Directive in Tariff Order dated 31st March 2022

The Commission appreciates the efforts undertaken by the Petitioner towards fulfilment of RPO. The Petitioner is emphasizing on procuring more physical power than purchase REC's in accordance with the Commissions directions. The Petitioner is directed to continue its efforts towards fulfilment of RPO and ensure yearly compliance are achieved.

Petitioner's Response in the Present Tariff Petition

ED-Goa has fulfilled 61.86% (Overall) upto H1 of FY 2022-23 considering the actual Renewable Power purchase position (Physical Power and REC). EDG has already submitted the action plan to fulfill the entire RPO along with the backlog of FY 2021-22 by 31st March 2023.

Commission's Response

The Commission appreciates the efforts undertaken by the Petitioner towards fulfillment of RPO. The Petitioner is emphasizing on procuring more physical power than purchase REC's in accordance with the Commissions directions. The Petitioner is directed to continue its efforts towards fulfillment of RPO and ensure yearly compliance are achieved.

9.1.10. Billing and Collection Efficiency

Originally Issued in Tariff Order dated 06th April 2015

Commission's Latest Directive in Tariff Order dated 31st March 2022

The Commission is yet to receive the report from the Petitioner. The Commission directs the Petitioner to submit the same within one month of the issuance of this Order.

Petitioner's Response in the Present Tariff Petition

The EDG has submitted the Report on One Time Settlement Scheme 2020 is before the Hon'ble Commission in the 1st Quarter Directives compliance report of FY 2021-22.

Commission's Response

The Commission has noted the Petitioner's submission and accordingly drops this directive

9.1.11. Determination of Category wise/ Voltage wise Cost of supply

Issued in Tariff Order dated 20th May 2019

Commission's Directive in Tariff Order dated 31st March 2022

The Petitioner is directed to submit voltage-wise and category-wise details of assets, O&M expenses and fixed asset cost allocation for the last 3 years along with the Tariff Petition for FY 2023-24.
Petitioner's Response in the Present Tariff Petition
GIS Mapping of all Assets have been completed. The voltage wise and category wise units have also been identified during the Energy Audit process. GED is in process of appointment of consultant for identify voltage-wise and category-wise details of assets, O&M expenses and fixed asset cost allocation for the last 3 years.
Commission's Response
The Petitioner is directed to submit voltage-wise and category-wise details of assets, O&M expenses and fixed asset cost allocation for the last 3 years within six months of issuance of this order.

9.1.12. Submission of Petition for True up of FY 2016-17, FY 2017-18, FY 2018-19 and FY 2019-20 and APR of FY 2020-21

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 31st March 2022
The progress shown by the Petitioner is not satisfactory. As reiterated last year, the Commission has taken a serious note of this issue. The Petitioner is directed to submit the audited annual accounts for FY 2017-18, FY 2018-19, FY 2019-20, FY 2020-21 and FY 2021-22 by 30th November 2022.
Petitioner's Response in the Present Tariff Petition
• *EDG has filed the True-up Petitions for FY 2017-18, FY 2018-18 & FY 2019-20 before the Hon'ble JERC.* • *Financial Accounts for FY 2020-21 & FY 2021-22 are completed. The CAG audit team is auditing the accounts. Upon completion of the audit of the Accounts for FY 2020-21 & FY 2021-22 the True-up Petitions for FY 2020-21 & FY 2021-22 will be submitted before the Hon'ble JERC by December 20, 2022..*
Commission's Response
The Commission has noted the Petitioner's submission regarding the submission of pending true-ups. Further, the Commission directs the Petitioner to file true-ups along with the upcoming tariff petitions going forward in a timely manner. Accordingly, the Commission drops this directive

9.1.13. Collection of data based on consumer type

Issued in Tariff Order dated 20th May 2019
Commission's Directive in Tariff Order dated 31st March 2022
The Commission directs ED-Goa to start collecting information of energy sales, connected load, number of consumers, power factor, ToD sales etc., wherever applicable, for different type of consumers such as Hotel Industries, Govt./Private educational institutions, Govt./Private hospitals etc. within the existing categories and submit the requisite information along with the next quarterly progress report. The Commission is yet to receive the requisite details from the Petitioner. The Commission directs the Petitioner to submit the same within one month of the issuance of this Order.
Petitioner's Response in the Present Tariff Petition

The requisite data has been submitted to the Commission in the MYT ARR Tariff Petition No.63 of 2021 in the Annexure-6.
Commission's Response *The Commission has noted the Petitioner's submission and accordingly drops this directive. Further, the Petitioner is directed to submit the requisite data along with the tariff petitions from next year onwards.*

9.1.14. KVAh based tariff for LT-Industrial and LT-Commercial categories

Issued in Tariff Order dated 30th March 2021
Commission's Directive in Tariff Order dated 31st March 2022 *The Petitioner is directed to ensure kVAh reading for all LT-Industrial and LT-commercial meters at the earliest so that kVAh based billing can be introduced for them too as has been done for HT consumers and submit the requisite information along with the Tariff Petition for FY 2023-24.*
Petitioner's Response in the Present Tariff Petition *The Electricity Department has been sanctioned 750356 Prepaid Smart meters under Revamped Distribution Sector Scheme (RDSS) as per the Sanction letter dated 10/10/2022. The timelines for installation of all Pre-paid Smart meters is March, 2025. The kVAh based billing will be carried out for LT Commercial and LT Industrial after installation of the Smart Meters.*
Commission's Response *The Petitioner is directed to ensure kVAh reading for all LT-Industrial and LT-commercial consumers with contracted demand more than 20 kW at the earliest so that kVAh based billing can be introduced for them too as has been done for HT consumers and submit the requisite information along with the Tariff Petition for FY 2024-25.*

10. Chapter 10: Tariff Schedule

10.1. Tariff Schedule

Table 126: Tariff Schedule

	Category	Approved Tariff	
		Fixed Charges	Energy Charges
1	**Domestic**		
A	**Low Tension-D/LT-D**		
	0-100 units	INR 20/kW/Monthor part thereof	1.75 Rs/kWh
	101-200 units	INR 20/kW/Monthor part thereof	2.60 Rs/kWh
	201 to 300 units	INR 20/kW/Monthor part thereof	3.30 Rs/kWh
	301 to 400 units	INR 20/kW/Monthor part thereof	4.40 Rs/kWh
	Above 400 units	INR 20/kW/Monthor part thereof	5.10 Rs/kWh
B	**Low Tension-LIG/LT-LIG**	INR 20/kW/Monthor part thereof	-
C	**High Tension-D/HT-D**		
	All Units	INR 110/kVA/Monthor part thereof	4.60 Rs/kVAh
2	**Commercial**		
A	**Low Tension-C/LT-C**		
	0-100 units	For consumers with Load upto 20 kW INR 45/kW/Monthor part thereof For consumers with Load more than 20 kW and upto 90 kW INR 70/kW/Monthor part thereof	3.60 INR/kWh
	101-200 units		4.40 INR/kWh
	201 units- 400 units		5.00 INR/kWh
	Above 400 units		5.30 INR/kWh
B	**High Tension-C/HT-C**		
	All Units	INR 250/kVA/monthor part thereof	5.25 INR/kVAh
3	**Industrial**		
A	**Low Tension-I/LT-I**		
	0-500 units	INR 50/HP/Monthor part thereof	3.60 INR/kWh
	Above 500 units	INR 50/HP/Monthor part thereof	4.25 INR/kWh
B	**Low Tension-Mixed/LT-P (Hotel Industries)**		
	All Units	INR 60/kW/Monthor part thereof	5.60 INR/kWh
C	**High Tension-I/HT-I**		
	Connected at 11/33 kV	INR 275/kVA/Monthor part thereof	4.95 INR/kVAh
	Connected at 110 kV	INR 275/kVA/Monthor part thereof	4.90 INR/kVAh
D	**High Tension- Ferro/SM/ PI/ SR**		
	All Units	INR 275/kVA/Monthor part thereof	4.95INR/kVAh
4	**Agricultural**		
A	**Low Tension-AG/LT-AGP (Pump Sets/Irrigation)**		
	All Units	INR 18/HP/Monthor part thereof	1.50 INR/kWh
B	**Low Tension-AG/LT-AGA (Allied Activities)**		
	All Units	INR 25/HP/Monthor part thereof	1.75 INR/kWh
C	**High Tension-AG/HT-AGP (Pump Sets/Irrigation)**		
	All Units	INR 40/kVA/Monthor part thereof	1.60 INR/kVAh
D	**High Tension-AG/HT-AG (Allied Activities)**		
	All Units	INR 70/kVA/Monthor part thereof	1.95 INR/kVAh

	Category	Approved Tariff	
		Fixed Charges	**Energy Charges**
5	**Military Engineering Services/defense Establishments**		
	All Units	INR 220/kVA/Monthor part thereof	5.10INR/kVAh
6	**Public Lighting**		
	All Units	INR 75/kW/Monthor part thereof	5.65 INR/kWh
7	**Hoardings/Signboards**		
	All Units	INR 70/kVA/Monthor part thereof	10.00 INR/kWh
8	**Temporary Supply**		
A	LT Temporary Domestic	Tariff shall be Fixed/ Demand charges (if any) plus energy charges (for relevant slab, if any) under corresponding permanent supply category plus 50% of both. For multi activity pursuit, applicable Tariff for temporary connection shall be with reference to that of commercial category for permanent supply.	
B	LT Temporary Commercial		
C	HT Temporary		
9	**Single Point Supply**		
A	Residential Complexes	INR 110 per kVA per month or part thereof	4.60INR/kVAh
B	Commercial Complexes	INR 250 per kVA per month or part thereof	5.25INR/kVAh
C	Industrial Complexes	INR 275 per kVA per month or part thereof	4.95INR/kVAh
10	**Electric Vehicle Charging Station**	-	4.50* INR/kVAh

**This tariff is applicable only for supply at HT. In case of LT supply, tariff will be INR 0.20/kVAh higher than the above tariff.*

10.2. Applicability

Low Tension Category - Applicable to Power Supply of Voltages at 230V and 440V Voltages when the Sanctioned Load is below 100 KVA/90 KW / 120 HP and power is supplied at single/three phase.

High Tension/ Extra High Tension Category - Applicable to Power Supply of Voltages at 11KV/33KV/ 110KV and above i.e. High/Extra High Voltages when the Contracted Demand is above 100 KVA/ 90 KW/120 HP and power is supplied at three phase.

Table 127: Applicability of Tariff Schedule

Category	Applicability	Point of Supply/Notes
1. LT Domestic	This schedule shall apply to private residential houses, government residential quarters, Government schools and related facilities, charitable institutions, religious institutions etc. for consumption of energy using normal domestic appliances. Professionals such as Doctors, Engineers, Lawyers, CAs, Journalists and Consultants practicing from their residence irrespective of location provided that such use shall not exceed 25% of the area of the premises or as specified in the rules/regulations of their respective State or Union Territory.	a. For the premises or flats which are closed or locked for a continuous period of more than three months and having sanctioned / connected load more than 10 kW, the monthly minimum charges would be Rs 1000/-.

Category	Applicability	Point of Supply/Notes
2. HT Domestic	This schedule shall apply to individual residential consumers of Bungalows, Villas, Cottages, etc. using normal domestic appliances and whose contract demand falls within the threshold limit of HT category.	
3. Low Income Group/Life Line consumers	This schedule shall apply to consumers of Low Income Group who have a sanctioned load of up to 0.25 kW and who consume up to 50 units per month only.	The applicability of the Low Income Group category will be assessed at the end of each month and in case the consumption exceeds 50 units per month, the entire consumption would be billed at the rate of LTD-/Domestic for that particular month.
4. Commercial – LT and HT	This tariff is applicable to any activity not specifically covered in any other consumer categories, or although covered in another activity, the use is made for a commercial category. It would include electricity used in all non- residential, non-industrial premises and/or commercial premises for commercial consumption meant for operating various appliances. It would include the following categories but not limited to: • Houses with rent back facilities • Government hospitals • Professionals not covered in domestic category. • Commercial Complexes and Business premises, including Shopping malls/show rooms, offices / shops; • Combined lighting and power services for Entertainment including film studios, cinemas and theatres, including multiplexes, Race Course, Meeting/Town Halls, Clubs, all types of Guest houses; • Offices including Government Offices, Commercial Establishments; • Marriage Halls (including halls attached to religious places), Hotels /Restaurants (without boarding facilities), Ice-cream parlours, Bakeries, Coffee Shops, private hospitals, private messes, Internet / Cyber Cafes, Mobile Towers, Microwave Towers, Satellite Antennas used for telecommunication activity, Telephone Booths, Fax / Xerox Shops, X-ray installations, bars and cold drink houses, Tailoring Shops, Computer Training Schools, Typing Institutes, Photo Laboratories, Photo Studios, Laundries, Beauty Parlours and Saloons, dry cleaners etc.	Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture Allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged commercial tariff.

Category	Applicability	Point of Supply/Notes
	• Automobile and any other type of repair centers, Retail Gas Filling stations, Petrol Pumps and Service Stations including Garages, Tyre Vulcanizing units, Battery Charging Units, Tyre vulcanizing centres etc; • Banks, Telephone Exchanges, TV Station, Micro Wave Stations, All India Radio (AIR) Stations, ATM Centres etc; • For common facilities, like Water Pumping / Street Lighting / Lifts / Fire Fighting Pumps / Premises (Security) Lighting, etc. in Commercial Complexes; • Sports Clubs, Health Clubs, Gymnasium, Swimming Pools; • Research and Development units situated outside Industrial premises; • Airports, Railways, Railway Stations, Bus stands of KTC etc; • Educational institutions excluding Government Schools and related facilities	
5. LT Industrial	This tariff shall apply to industrial units engaged in industrial activities, manufacturing process etc. It would include the following categories but not limited to: • Flour Mills, wet grinding, Dal Mills, Rice Mills, Poha Mills, Masala Mills, Saw Mills, Power looms including other allied activities like Warping, Doubling, Twisting, etc. • Ice Factories, Ice Cream Manufacturing units/ Plants, Dairy Testing Process, Milk Dairies, Milk Processing/ Chilling Plants (Dairy) etc; • Engineering workshops, Engineering Goods Manufacturing units, Printing Presses, Transformer repairing Workshops, Tyre retreading units, Motive Power Loads etc; • Mining, Quarry and Stone Crushing units etc; • Garment Manufacturing units, • LPG/ CNG Bottling plants etc; • Sewage Water Treatment Plants/ Common Effluent Treatment Plants owned, operated and managed by Industrial Associations and situated within industrial area. • Pumping of water for public water supply, Sewage Treatment Plants, activities related with public water	The above mentioned tariff is based on the supply being given through a single delivery and metering point and at a single voltage.

Category	Applicability	Point of Supply/Notes
	Supply Schemes and Sewage Pumping Stations. • Use of electricity / power supply for activities/ facilities exclusively meant for employees of the industry within the premises of the Industry. • IT Industry, IT parks etc.	
6. LT Mixed – Hotel Industries	This schedule shall apply to Hotels/ restaurants with lodging and boarding facilities.	Hotel Industry consumers intending to avail the facility of this tariff should produce a certificate from the Tourism Department stating that the intending applicant is registered under Goa Registration of Tourist Trade Act, 1982 and in the Hotel business on a regular basis. On receipt of the certificate, such tariff shall be made effective from the date of original validity of the certificate. In case of failure to produce the certificate, the same shall be considered under Commercial category.
7. HT Industrial	This schedule shall apply to consumers taking electricity supply for Industrial purpose. It shall also include the following categories: • Bulk Supply of power at 11 KV, 33 kV /110 KV and above for industries, factories and other industrial purposes. • Bulk supply of power at 11 KV and above for educational institutions owned or aided by Government, non-industrial establishments, • Industrial units engaged in Ice Manufacturing Units; • Hotels with lodging and boarding facilities etc • Use of electricity / power supply by an establishment such as IT Industries, IT Parks, IT Units • Pumping of water, public water supply, public water treatment plant, activities related with Supply Schemes and Sewage Treatment Plants, Sewage Pumping Stations etc	
8. HT Ferro Metallurgical /Steel Rolling/Steel Melting/Power Intensive	This schedule shall apply to supply of power having a Contract Demand from 100 KVA up to 1000 KVA at 11 KV and above 1000 KVA at 33 KV for Steel rolling industry and Metal Alloy, Steel Melting, Ferro Alloy, and Ferro metallurgical industries where melting is involved using electric power.	

<table>
<tr><th>Category</th><th>Applicability</th><th>Point of Supply/Notes</th></tr>
<tr><td>9. LT and HT Agriculture Pump sets</td><td>This schedule shall apply to establishments for Irrigation pumping, De-watering and Lift Irrigation for cultivation of food crops such as cereals, pulses, vegetables and fruits etc and Cane crusher and/or fodder cutter for self-use for Agricultural purposes.</td><td rowspan="2">This tariff shall be applicable from the date of production of a certificate from the Directorate of Animal Husbandry or Agriculture Department of Government of Goa to the effect that the consumer carried on the said activity on regular basis. In case of failure to produce the certificate, the same shall be considered under Commercial category.
Cold Storages which are solely attached to Agriculture and its allied activities shall be charged tariff of Agriculture allied activities. All other cold storages which are partly or not attached with Agriculture and Allied activities shall be charged Commercial Tariff.</td></tr>
<tr><td>10. LT and HT Agriculture Allied Activities</td><td>This schedule shall apply to establishments for other allied activities related to Agriculture and shall include but not limited to:
• Poultry farms, Livestock farms, Combination of livestock farms with dairy, Piggery etc
• Horticulture, Green Houses, Plantations, all types of nurseries etc.
• Fish farms including ornamental fish farms, prawn farms, other aqua farms etc
• Tissue culture, Mushroom activities, Aquaculture, Floriculture, Fisheries, Sericulture, Floricultural nurseries, hatcheries etc
• Any other agricultural activity not falling under HT-Agriculture (A) shall be covered under this category</td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>11. MES/Defense Establishments</td><td>This schedule shall apply to supply of power for defense installation establishments, having mixed load with predominantly lighting or non-industrial load of more than 50% of connected load.</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>12. LT Public Lighting</td><td>This schedule shall apply to public lighting systems. It would include the following categories but not limited to:
• Market Places, Roads, Pathways and Parking Lighting belonging to local authorities such as Municipality/ Panchayats/ Government;
• Lighting in Public Gardens;
• Traffic Signals and Traffic Islands;
• State Transport Bus Shelters;
• Public Sanitary Conveniences; and
• Public Water Fountains and such other Public Places open for general public free of charge.
• Street lighting in the colony of a factory which is situated separately from the main factory.
• This shall also be applicable to public lighting of Government/ Semi Government Establishments but shall not be applicable in case of private establishments</td><td></td></tr>
<tr><td></td><td></td><td></td></tr>
<tr><td>13. LT Hoardings/ Sign Boards</td><td>This schedule shall apply to lighting advertisements, hoardings and displays at</td><td></td></tr>
</table>

Category	Applicability	Point of Supply/Notes
	departmental stores, malls, multiplexes, theatres, clubs, hotels, bus shelters, Railway Stations etc. and shall be separately metered and charged at the tariff applicable for "Hoardings / Sign Board" category. However use of electricity for displays for the purpose of indicating / displaying the name and other details of the shop, on commercial premises itself, shall be covered under the prevailing tariff for such shops or commercial premises.	
14. Temporary Supply	This schedule shall apply to usage of electricity for all temporary purposes.	i. The temporary connection shall be released through a proper meter ii. The Temporary Tariff is applicable for a temporary period of supply for a period of maximum one (1) year at a time, which may be further extended, as per the provisions of Supply Code Regulations as notified by JERC.
15. HT SPS Single Point Supply	This schedule shall apply to a group of consumers who desire to take a HT connection at single point for consumption of energy within a Residential Complex – Group Housing Societies, Residential Housing Colonies, Cooperative Group Housing Societies, Township Areas; Commercial Complexes, including Malls; Industrial Complexes, including IT Parks, Bio-Parks or other entities classified as industries by the Government of Goa.	In case of a dispute on whether the complex can be classified as an industrial complex, a certificate from Industries Department, Government of Goa will be required. The following shall be the different combinations for SPS in a defined area: i. All LT consumer mix area ii. All HT consumer mix area iii. HT+LT consumer mix area a. The General Conditions, Miscellaneous and General Charges would also be applicable for all SPS categories. b. Based on technical and administrative feasibility, the ED-Goa may consider providing SPS power supply at HV/ EHV level to a complex at a mutually agreed injection point. c. The SPS arrangement would be applicable for the application received from a Residential complex / Association of Persons (AOP) / Developer of the complex or any other such similar person. d. The SPS arrangement would be considered by ED-Goa only if the minimum sanctioned cumulative contracted demand of the complex (group of consumers) is 1.15 MVA/ 1 MW. e. The complete cost of erection and O&M for the sub-transmission and distribution infrastructure within such complex would need to be

Category	Applicability	Point of Supply/Notes
		borne by the said SPS applicant. f. The SPS applicant would be required to develop and maintain an efficient, coordinated and quality sub-transmission and distribution system in its area of electricity supply. Further, the applicant would be responsible to comply with Standards of Performance and Supply Code Regulation as laid down under JERC Regulations and guidelines of Goa Electricity Department, if any. The network within the complex will need to be certified by the Chief Electrical Inspector. g. For Residential Complexes, SPS application shall be entertained for groups of LT consumers only. The loads of common amenities for such group may include pumps for pumping water supply, lifts and lighting of common area. However, the consumption of energy for common services shall be separately metered with meters installed by the consumer and tested and sealed by licensee. The consumption of such energy over and above 10% of the total consumption of energy shall be billed at LT Commercial Tariff. The user shall inform the details of every non-domestic activity within the residential complex, such as commercial complex, industrial activity, and recreation club, along with the connected load to the licensee at the time of seeking the connection or at the time of enhancement in contract demand, and shall seek a separate connection for the same in case the common load is more than 10%. h. Individual Domestic HT consumers in a residential complex that opt for SPS shall need to apply separately under HT Domestic category. i. The SPS applicant shall not charge tariff to the downstream consumers higher than stipulated. j. The applicant shall be obliged to pay the total tariff (total billed amount) due to ED-Goa, as measured at HT end of SPS. However, to cover energy transformation losses and other O&M expenses, such applicant would be eligible to get rebates

Category	Applicability	Point of Supply/Notes
		from ED-Goa on full bill payment, within the due time: i. 5% on the overall billed amount in all cases of LT and HT consumers ii. Any other loss would be to the account of the applicant. k. For CC and IC applicant, any LT / HT Consumer in the area should have minimum 80% pre-dominant load of their appropriate category i.e. mix load is allowed only upto 20%. For e.g. If a HT/ LT Industry Consumer has Factory, Residential Colony for its workers and also some Commercial facilities for his staff and the total of Residential and Commercial load is say around 30%, then separate Individual SPD connection may be taken for each such group as per activity. l. The implementation of SPS arrangement should be in accordance with the Electricity Act, 2003 and APTEL judgement dated 11th July 2011 in appeal no. 155 and 156 of 2010 in this regard.
16. Electric Vehicle Charging Stations	This tariff schedule shall apply to consumers that have set up Public Charging Stations (PCS) in accordance with the technical norms/ standards/specifications laid down by the Ministry of Power, GoI and Central Electricity Authority (CEA) from time to time. The tariff for domestic consumption shall be applicable for domestic charging (LT/HT)	

10.3. General Terms and Conditions

1) The tariffs are exclusive of electricity duty and taxes levied by the Government or other competent authority from time to time which are payable by the consumers in addition to the charges levied as per the tariffs.

2) Unless otherwise agreed to, these tariffs for power supply are applicable for supply at one point only.

3) Unless specifically stated to the contrary the figures of energy charges relate to rupee per unit (kWh) charge for energy consumed and fixed charge relates to a month.

4) If the energy supplied for a specific purpose under a particular tariff is used for a different purpose not contemplated in the contract for supply and / or for which a higher tariff is applicable, it shall be deemed as unauthorized use of electricity and shall be assessed under the provisions of section 126 of the Electricity Act, 2003 and Supply Code Regulation notified by the JERC.

5) Fixed charges, wherever applicable, will be charged on pro-rata basis from the date of release of connection. These shall be double in case bi-monthly billing is carried out and shall be proportionately calculated as per the number of days of billing, Similarly slabs of energy consumption shall also be considered accordingly in case of bi-monthly or periodic billing.

6) The consumption for factory lighting/pump house lighting shall be billed as per respective main tariff category. A separate energy meter for recording energy consumed towards factory lighting for new installation need not be provided. For the existing installations, till the factory lighting meter's mains are shifted to main meter, the total energy consumption shall be arrived at by adding the energy consumption of the main energy meter and the factory lighting meter.

7) The conditions, definitions etc. shall be applicable as per the Electricity Act 2003 and various JERC Regulations, such as Standards of Performance, Supply Code, Conditions of Supply, Distribution Code etc., issued from time to time.

8) **Billing of Demand in excess of Contracted Demand**

   The billing shall be on the maximum demand recorded during the month or 85% of contracted demand whichever is higher. If in any month, the recorded maximum demand of the consumer exceeds its contracted demand, that portion of the demand in excess of the contracted demand shall be billed at double the normal rate. Similarly, energy consumption corresponding to excess demand shall also be billed at double the normal energy rate.

   The definition of the maximum demand would be in accordance with the provisions of the Supply Code Regulations notified by JERC. If such over-drawal is more than 20% of the contracted demand then the connection shall be disconnected immediately.

   Explanation:

   Assuming the contract demand as 100 kVA, maximum demand at 120 kVA and total energy consumption as 12000 units, then the consumption corresponding to the contract demand will be 10,000 units (12000 X 100/ 120) and consumption corresponding to the excess demand will be 2000 units. This excess demand of 20 kVA and excess consumption of 2000 units will be billed at twice the respective normal rate.

9) The adjustment because of Fuel and Power Purchase Cost variation shall be calculated in accordance with the FPPCA formula separately notified by the Commission under the Regulation. Such charges shall be recovered / refunded in accordance with the terms and conditions specified in the FPPCA formula.

10) The values of the 'K' factor applicable for the different consumer categories for use in the FPPCA formula shall be as specified in Chapter 9 of this Tariff Order.

11) For staff quarters, rest/guest houses, street lighting in the colony of a factory which is situated separately from the main factory and for distribution lines, service lines, etc. permitted to be owned and maintained by the HT consumer owning the factory, there shall be a separate connection and such energy consumed shall be charged under Single Point Supply.

12) **Advance Payment Rebate:** If payment is made in advance well before commencement of the consumption period for which the bill is prepared, a rebate @ 1% per month shall be given on the amount (excluding security deposit, taxes and duties) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

    If payment is made in advance along with prior declaration of premises to be closed for a certain period of time, a rebate of 1% per month shall be given on the amount (excluding security deposit, taxes and duties) which remains with the licensee at the end of the month. Such rebate, after adjusting any amount payable to the licensee, shall be credited to the account of the consumer.

13) **Prompt Payment Rebate:** If payment is made at least 7 days in advance of the due date of payment a rebate for prompt payment @ 0.25 % of the bill amount (excluding taxes and duties) shall be given in case of cash payment and . Those consumers having arrears shall not be entitled for such rebate and the amount paid will first be used to set off past liabilities.

Provided that in case the payment is made by cheque, the prompt payment discount will be applicable only if the payment by cheque is made 3 days prior to date of availing the prompt payment discount i.e. before 10 days from the due date of payment.

14) **Delayed Payment Charges (DPC)**: In case the electricity bills are not paid within the due date mentioned on the bill, delayed payment charges of 1.5% (computed on a daily basis on the outstanding bill from the due date till the date of payment) shall be levied on the bill amount. However, if a consumer makes part payment of a bill (in exceptional circumstances, with prior approval of the Chief Electrical Engineer), within the due date, then the delayed payment charges shall be applicable only on the amount which was not paid within the due date.

Such surcharge shall be rounded off to the nearest multiple of one rupee. Amount less than 50 paise shall be ignored and amount of 50 paise or more shall be rounded off to the next rupee.

If the consumer fails to pay the energy bill presented to him by the due date the department shall have the right to disconnect the supply as per provision of the Electricity Act 2003 and Supply Code Regulations notified by JERC as amended from time to time.

In case of non-realization of payment through Cheque, a penalty of 5% of the cheque amount in addition to the Delayed Payment Charges (DPC) will be levied on the consumers

15) **Time of Day Tariff (ToD):**

i. Under the Time of Day (ToD) Tariff, electricity consumption and maximum demand in respect of HT/EHT consumers for different periods of the day, i.e. normal period, peak load period and off peak load period, shall be recorded by installing a ToD meter.

ii. The maximum demand and consumption recorded in different periods shall be billed at the following rates on the tariff applicable to the consumer.

Table 128: Applicability of ToD Tariff

Time of use	Demand Charges	Energy Charges
Normal period (7:00 a.m. to 6:00 p.m)	Normal Rate	Normal rate of energy charges
Evening peak load period (6:00 p.m to 11.00 p.m)	Normal Rate	120% of normal rate of energy charges
Off-peak load period (11:00 p.m to 7:00 a.m)	Normal Rate	90% of normal rate of energy charges

iii. Applicability and Terms and Conditions of TOD tariff:

a) TOD tariff is mandatory for HT/EHT consumers and shall be optional for LT industrial and commercial consumers

b) The facility of aforesaid TOD tariff shall not be available to HT/EHT consumers having captive power plants and/or availing supply from sources other than ED-Goa through wheeling of power.

c) The HT/EHT industrial consumers who have installed standby generating plants shall also be eligible for the aforesaid TOD tariff

d) In the event of applicability of TOD tariff to a consumer, all other terms and conditions of the applicable tariff shall continue to apply.

10.4. Schedule of Miscellaneous Charges

Table 129: Schedule of Miscellaneous Charges

Description	Approved Charges
Reconnection Charges(as per provisions of Supply Code Regulations notified by JERC)	

Description	Approved Charges
LT Services – At Cut outs	
• Single Phase	INR 25/-
• Three Phase	INR 50/-
LT Services – At Overhead Mains	
• Single Phase	INR 30/-
• Three Phase	INR 50/-
LT Services – At Underground Mains	
• Single Phase	INR 75/-
• Three Phase	INR 125/-
HT Services	INR 200/-
Note: If the same consumer seeks reconnection within 12 months from the date of reconnection or disconnection, 50% will be added to above charges	
Re-Rating of Installations	
Lighting Installation	INR 50/-
Motive Power Installation	INR 100/-
High Tension	INR 500/-
Testing Fee for Various Metering Equipments (as per provisions of Supply Code Regulations notified by JERC)	
Single phase LT	INR 25/energy meter
Poly Phase LT without CT	INR 50/energy meter
L.T. meter with CTs/Demand or Special Type Meters	INR 150/energy meter
H.T and E.H.T. metering equipment	INR 10,000/- at site
Transformer Oil	INR 200/- per sample
LT Current Transformer at Lab	INR 50/- per sample
3 – Ø Phase Tri-vector Meter Industrial LT Consumer	INR 1000/- for laboratory testing
3 – Ø Phase Tri-vector Meter 11 KV and 33kV HT Consumer	INR 5,000/- at site
Three Phase Tri-Vector Meter 110 KV EHT Consumers	INR 1,000/-at site
Combined CTPT Unit for 11kV and 33kV Consumer	INR 2,500/-
110KV CT / PT Unit	INR 10,000/-
Single Phase CT	INR 150/ unit
Three Phase TT Block	INR 500/unit
Distribution Transformer Testing (HT con.)	INR 6,000
Power Transformer Testing (EHT consumer)	INR 20,000
Service Connection Charges(as per provisions of Supply Code Regulations notified by JERC)	

Description	Approved Charges
Single Phase 1 ϕ	INR 250
Three Phase 3 ϕ	
Up to 5 HP	INR 500
5 HP to 20 HP	INR 800
Above 20 HP	INR 1,200
HT (First 500 KVA)	INR 10,000
HT (Beyond 500 KVA)	INR 20,000
HT Additional Load	INR500/- for every addition of 100 KVA
Extra Length for 1 ϕ (beyond 30 meters)	INR 50 /meter
Extra Length for 1 ϕ for agricultural consumers (beyond 300 meters)	INR 25 /meter
Extra Length for 3 ϕ (beyond 30 meters)	INR 100 /meter
Extra Length for 3 ϕ for agricultural consumers (beyond 300 meters)	INR 50 /meter
Underground Service Cable	Actual Charges + 15%
Shunt Capacitor- 20 kW to 50 kW	INR 2,000
Shunt Capacitor- above 50 kW	INR 5,000
Testing Consumer's installation(as per provisions of Supply Code Regulations notified by JERC)	
For first test of the new installation on or off an extension to an existing installation if the installation is found to be defective.	NIL
For Subsequent test of the new installation or of an existing installation if the installation is found to be defective	
• Single phase LT	INR 100/-
• Three phase	INR 200/-
• MS/BS loads upto70kW	INR 4,000 + GST
• LS/BS/RT (loads Above 70kW)	INR 8,000 + GST
• Shunt Capacitor- 20 kW to 50 kW	INR 1,000 + GST
• Shunt Capacitor- above 50 kW	INR 4,000 + GST
Changing the Meter or its position in the same premises at the request of the consumer when no additional material is required(as per provisions of Supply Code Regulations notified by JERC)	
Single phase	INR 100/-
3-phase without C.Ts	INR 200/-
L.T. meter with C.T.s	INR 500/-
H.T and E.H.T. metering equipment	INR 8,000 + GST
Re-sealing charges irrespective of the number of seals involved against each item below and where seals found to have been broken by the consumer	
Meter cupboard / Meter Cubical / Box	INR 50/-

Description	Approved Charges
Where cut-out is independently sealed	INR 50/-
Meter cover or Meter Terminal cover	INR 50/-
Meter cover of Meter Terminal cover (3 phase).	INR 50/-
Maximum demand Indicator or C.T.s chamber	INR 50/-
Service Charges	
General Supply	
• Single Phase	INR 10/-
• Three phase below 70kW	INR 20/-
• Three phase above 70kW	INR 50/-
Industrial/bulk/ agriculture /Street Lightning Supply	
• Upto70kW	INR 25/-
• Above 70kW	INR 50/-
Replacement of broken glass	
Replacement of broken glass of meter cupboard (When there is default on Consumer Side)	INR 50/-
Replacement of broken Glass of single phase meter if the consumer has broken or tamper and with meter.	INR 50/-
Replacement of broken Glass of three phase meter if the consumer has broken or tamper and with meter	INR 50/-
Supply of duplicate copies of electricity bills	
Domestic Consumers	INR 5 per bill
Non Domestic consumers	INR 10 per bill
LT Industrial upto 20kW and AP Consumer	INR 5 per bill
H.T Industrial and Bulk supply consumer	INR 10 per bill
Stand by Meter	
HT	INR 10,000/-
EHT	INR 20,000/-
Check Meter	
HT	INR 10,000/-
EHT	INR 20,000/-
Load Enhancement	Actual Cost + 15% Supervision Charges
System Strengthening charges or capacity building charges,	Actual Cost + 15% Supervision Charges
Advance for Temporary Connections (Except for Prepaid meters)	
• Single phase LT	INR 2,000/-

Description	Approved Charges
• Three phase	INR 5,000/-
• HT	INR 20,000/-
• EHT	INR 20,000/-
Note : this shall be adjusted in bills	
Non-Refundable Registration-cum-processing fees	As per Supply Code Regulations notified by JERC
Underground service cable	
1 Phase through underground service cable	Rs. 100/meter
Extra Length 1 phase for Agriculture consumer(beyond 300 meters) through underground service cable	Rs. 25/meter
3 Phase through underground service cable	Rs. 300/meter
Extra Length for 3Phase for Agriculture consumers (beyond 300meters) through underground service cable	Rs. 100/meter
At location where overhead network exist and consumer desires to avail power through Underground service cable	Actual charges+15%

In case of bonafide agricultural pumping loads, the department shall provide overhead service lines at a free of cost upto 300 meters from the nearest distribution point i.e. existing rural transformer sub-station or from a service line already laid for supply to any other consumer, provided the latter has sufficient current carrying capacity. Any length in excess of the specified length shall be payable at a fixed cost of INR 25 / metre for single phase and INR.50/ meter for Three phase as approved under Schedule of General and Miscellaneous Charges

Annexures

Annexure 1: List of Stakeholders

The following is the list of the participants in Public Hearings conducted on 15th February 2023:

Table 130: List of participants in Public Hearing

Sr. No.	Name of Person	Organization / Address
1	Mr. Edddie Tavares	-
2	Mr. Sudheer Kumar	MRF Ltd
3	Mr. Suresh Babu	MRF Ltd
4	Mr. Sushant Dalvi	Malbhat
5	Ms. Apoorva Apte	Prayas Energy Group
6	Mr. Yogesh Kelkar	Alfro Plaza
7	Ms. Ashely Rosario	Panaji
8	Mr. Gerrard D'Mello	Goa Chamber of Commerce & Industry
9	Mr. Prakash Lotlikar	Goa Chamber of Commerce & Industry
10	Mr. Amey Kamat	Smart City, GSIA
11	Mr. Sanjay Amonkar	Goa Chamber of Commerce & Industry
12	Mr. Kiran Ballikar	Goa Chamber of Commerce & Industry
13	Mr. Deepak A. Ghatge	South West Port Ltd. Mormugao Harbour
14	Mr. Joseph D'Souza	Goa Chamber of Commerce & Industry
15	Mr. Yuri Alemao	LOP Varca Goa
16	Mr. Amit Patkar	Goa Congress President
17	Mr. Vishal Volvoikar	Old Goa, Panaji
18	Mr. M. David	Konkan Railway
19	Mr. Durgadas Kamat	Goa Forward Party, Panaji
20	Mr. Mohandas Lolienkar	Goa Forward Party, Margao
21	Mr. Sahil Borkar	Goa Forward Party, Panaji
22	Mr. Runall Kerkar	Goa Forward Party, Panaji
23	Mr. Aniket Katkar	Goa Forward Party, Margao
24	Mr. Dilip Sahakari	Panaji
25	Mr. Ashish Goundalkar	Tropical mushroom Panaji
26	Mr. Evelyn Mascarenhas	Goacan Volunteer
27	Mr. Mark Mascarenhas	Goacan Volunteer
28	Mr. Arturo D'souza	Santa Cruz
29	Ms. Shoma Patnaik	Reporter Navhind Times
30	Mr. Joe Pereira	Panaji
31	Mr. Venzy Veigas	MLA Benaulim
32	Mr. Ryan Gomes	Margao

www.goaprintingpress.gov.in

Printed and Published by the Director, Printing & Stationery,
Government Printing Press,
Mahatma Gandhi Road, Panaji-Goa 403 001.

PRICE – Rs. 161 .00

PRINTED AT THE GOVERNMENT PRINTING PRESS, PANAJI-GOA—41/100—5/2023.